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—Clifford Allbutt

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July 1945

Vol. 158, No. 7

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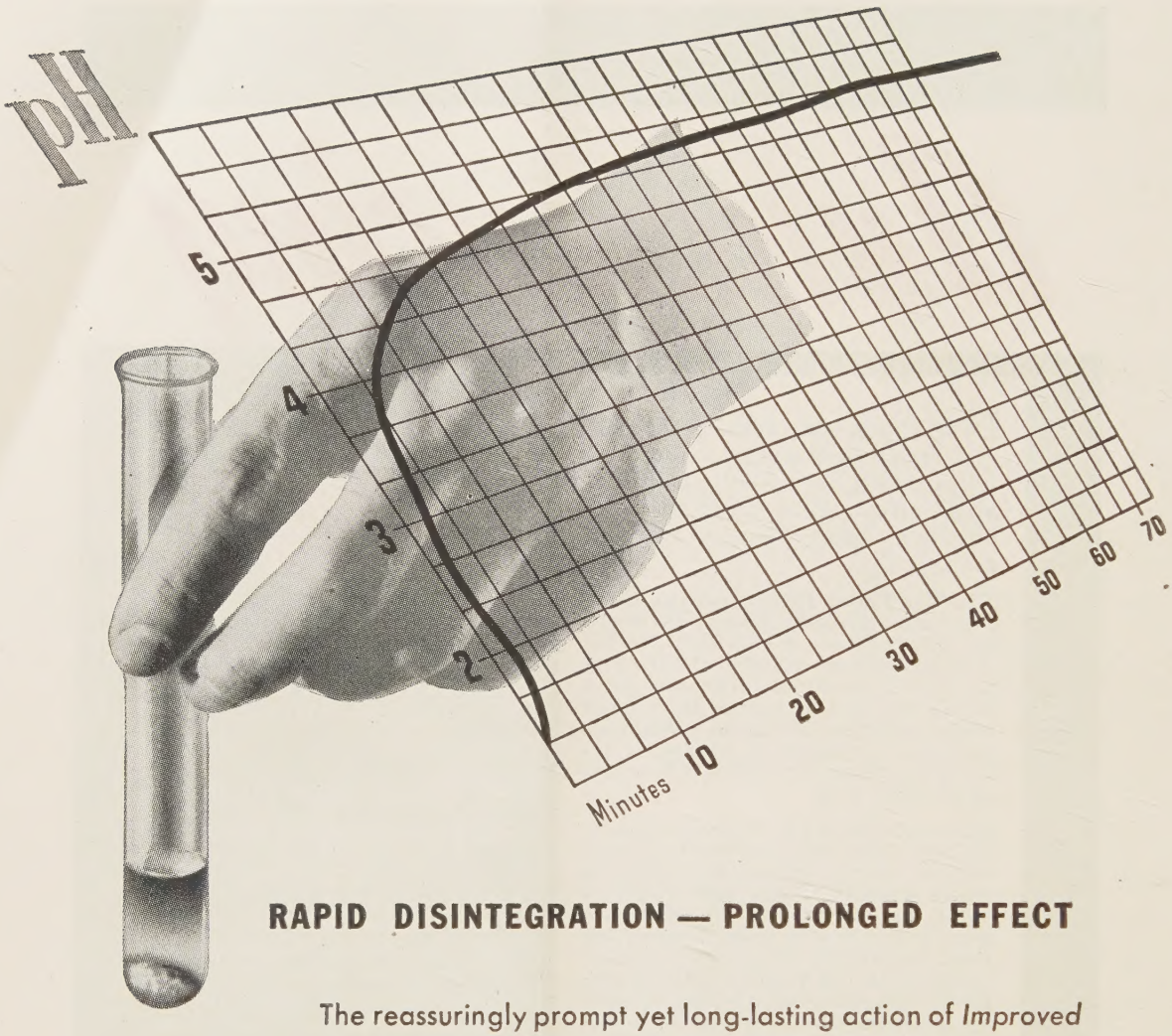

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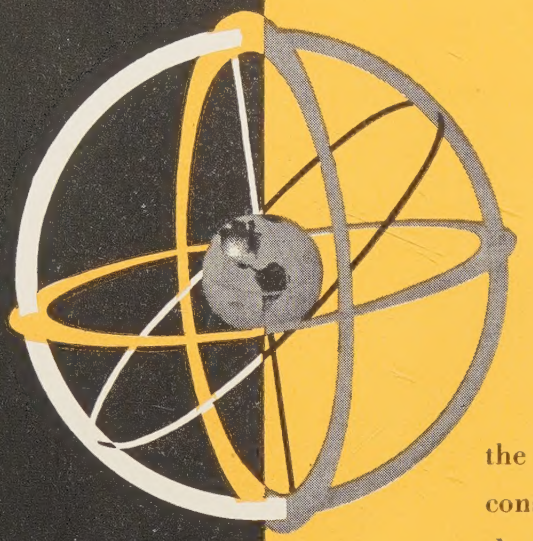

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Health of the Army

At a recent press and radio conference, Acting Secretary of War Robert P. Patterson said that no army at any time in history had achieved a record of recovery from wounds and freedom from disease comparable to that of the American Army in this war.

The Medical Department, its doctors, its nurses, its corpsmen, he said, had saved the lives of ninety-seven out of every one hundred men wounded in battle who reached a hospital, compared with ninety-two in the World War. Seventy out of every one hundred wounded overseas were returned to duty, and twenty-seven were evacuated to this country.

During the past three years, the Medical Department had maintained a record of less than one death from disease per one thousand men per year. During the World War, nineteen out of every one thousand men died each year from disease. During the Spanish-American War twenty-six out of every one thousand men died each year, and in the Civil War, sixty-five out of every one thousand men died each year from disease. In all, during this war, twelve thousand men died from disease from December 7, 1941, to May 1, 1945. In World War I, 62,670 men died from disease; in the Spanish-American War, 3,500 died from disease, and in the Civil War, 336,216 men of the Union and Confederate armies died from disease.

Malaria has been reduced from hundreds of cases per one thousand men per year to less than fifty. The dysenteries, which once put entire regiments and armies out of action, have occurred among less than ninety out of every one thousand men per year and have been readily controlled. During World War I, thirty-eight percent of the men who contracted meningitis died, compared with four percent in the present war, and twenty-four percent of those who contracted pneumonia died in 1918, compared with only seven-tenths of one percent in this war. No greater tribute can be paid to the Medical Department of the U.S. Army than the tribute paid by its record of saving lives in this war.

In anticipation of the movement of patients from Europe to this country, who are being returned from all theaters at the rate of 44,000 a month, the Army has provided seven additional hospital ships, three of which are now in service, with four more to be commissioned shortly. This will bring the total number of hospital ships to twenty-nine, with an aggregate patient capacity of twenty thousand. Of the twenty-five Army hospital ships now in operation, eighteen are in the Atlantic, five are in the Pacific, and two more are en route to the Pacific. In addition to these hospital ships, special hospital equipment has been placed aboard twenty-four troop transports, giving the Army an additional patient-carrying capacity of forty thousand. Eight thousand patients a month are being brought back to the United States by plane, with three-fourths of this air traffic over the Atlantic.

The arrival of these thousands of wounded and sick in this country during the next three months will place a heavy load on our general and convalescent hospitals. It can readily be seen that the Medical Department will be operating at capacity for many months.

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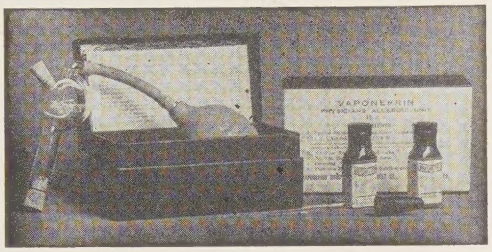

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Health Makes Wealth for the Americas

MAJOR GENERAL GEORGE C. DUNHAM

Assistant Coordinator of Inter-American Affairs

Washington, D.C.

(*Concluded from page 334*)

Chimbote.—This Peruvian port on the Pacific coast, north of Lima, is developing to serve a potential industrial area, tied in with irrigation, hydroelectric power, mining. To assist the development, the Peruvian health service, with the aid of United States doctors and engineers, is carrying on malaria control work and constructing medical facilities.

Inter-American Highway.—Work on the Inter-American Highway, from the United States border to the Panama Canal, has been accelerated during the war. This highway promises eventually to become one of the great arteries of hemisphere travel and to stimulate internal economic development and trade in Mexico and Central America. Many projects in Mexico and the Central American countries have been planned with an eye to improvement of sanitation conditions along the route of the highway. This applies particularly to water works, health centers, malaria control.

Bolivia.—Bolivia's economy centers in the mining areas of the high plateau. But, like Peru, Bolivia has a large area of potential economic development in the upper Amazon, providing communications and health and sanitation facilities can be improved. Airplanes and highways are bringing better communications. Now the inter-American cooperative service is building small hospitals, extending malaria control and sending trained personnel into Bolivia's Amazon country, one of the chief hemisphere sources of rubber and a potential source of other tropical products.

Ecuador.—Ecuador has extensive undeveloped areas, especially east of the Andes, which could be developed with the aid of communications and health and sanitation work. Rubber production has been increased. Health projects in Ecuador are planned to assist general economic development, as well as for immediate war needs in the production of balsa wood, quinine, rubber. New facilities include hospitals in Guayaquil, the leading port, and Quito, capital.

Central America.—Ordinarily a source largely of such export commodities as coffee, bananas and cocoa, the Central American republics have aided United Nations war industry by increasing production of fibers, rubber, cinchona bark and other forest and tropical plantation products. Extension of highways and air lines is adding vigor to economic development of these mountain-studded countries. The health and sanitation work in Guatemala, El Salvador, Honduras, Costa Rica, Nicaragua and Panama embraces mainly malaria control, construction of health centers, provision of safe water, sewerage facilities and the training of technical personnel. The activities are planned to aid long-range economic development in Central America and immediate war needs. Experimental work in tropical agriculture is being expanded, with new agricultural research and study centers opening in Costa Rica and Honduras.

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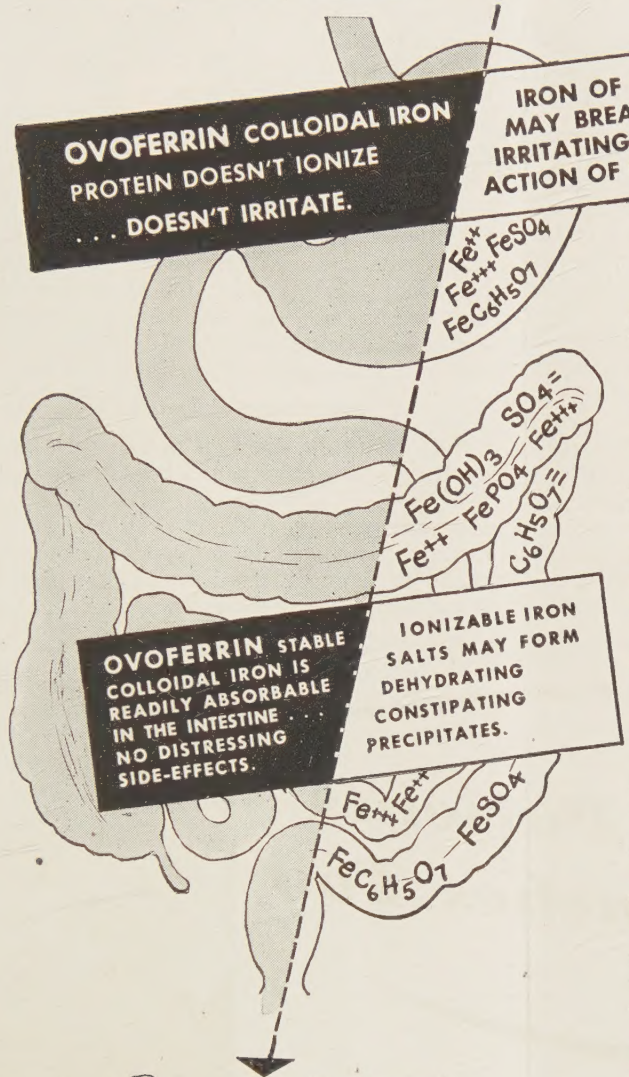
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Paraguay.—This inland country, with a population of only about one million in an area of 150,000 square miles, has long-range prospects for the development of agriculture, cattle raising and forest products, dependent partly upon improvement of health and sanitation facilities and communications. Health and sanitation work in Paraguay includes the construction of health centers in workers' districts in Asuncion, the capital; health education; study of water work needs.

Amazon Valley.—This vast area, two-thirds the size of the United States, has come into the spotlight during the war for its rubber, vegetable oils and its strategic position on international air routes. Air transport is aiding economic development of the valley. Brazil is encouraging colonization in the Amazon. Manaus, one thousand miles up the Amazon, and Iquitos, Peru, more than two thousand miles upstream, seem likely to become important points on hemisphere air routes. The immense forests in the Amazon Valley, besides rubber, hold incalculable quantities of vegetable oils, hardwoods, nuts and other tropical products. With better communications, and improvement of health facilities and food production, the Amazon may be expected to make faster economic progress. In recognition of this, the inter-American cooperative health service in Brazil has an extensive program of malaria control, training of technical personnel, hospital construction and disease investigation. This work centers in such Amazon Valley towns as Belem, gateway to the valley at the mouth of the river; Santarem, Manaus and Iquitos. The work in Brazil's Amazon area is supplemented by projects in Amazon sections of Bolivia, Peru, Equador, Colombia, introducing tropical medicine into the valley on the largest scale in its history.

Rio Doce Valley.—This valley, in the heart of Brazil's chief mineral and agricultural regions, is one of the Western Hemisphere's greatest sources of minerals. Mineral resources include some of the largest iron ore deposits in the world. Rail facilities are being reconstructed to expedite economic development. Health and sanitation work is being done both for wartime needs and to aid the longer-range development of the valley. Projects include malaria control around rail construction camps, health centers, training of sanitary inspectors, health education.

Haiti.—Haiti, one of the most thickly populated countries of the hemisphere, has increased its production of fibers for United States industry, is entering long-range development of rubber and fostering diversification of agriculture, also some local production of handicrafts and consumer goods. Haiti has a strategic position on Caribbean air and sea routes. Malaria control, training of personnel, control of yaws and other diseases are being carried on for immediate war needs and to aid long-range development of the country.

Importance of Trained Personnel

Just as sturdy, vigorous people are a nation's basic wealth, so the varied hemisphere health and sanitation work rests on a foundation of trained professional and technical personnel. Training of men and women in medicine, engineering, administration, technical work is one of the most effective roads to the attainment of rising hemisphere health and sanitation standards and

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the production of more wealth. Training is emphasized in the inter-American cooperative program. Aside from training done in the other American countries, many public health officials, doctors, engineers and specialists are being brought to the United States for study in medical schools and for observation of public health practices. More than three hundred physicians, nurses, sanitary engineers and other specialists have come to the United States for advanced training. In the other Americas, hundreds of persons have received instruction in sanitation, medical and nursing services, in health education under the inter-American program.

This increase of trained medical engineering personnel is wealth in the making. The training of professional and skilled personnel today is one of the best assurances of higher hemisphere health and sanitation standards in the world of tomorrow. When victory has been won on the battle fronts, these new continental forces of health will pursue the unending fight against disease. Victory in the ceaseless fight against disease, in turn, will mean more wealth for the Americas.

Life Expectancy

Hornell Hart and Hilda Hertz, of the Department of Anthropology, Duke University, have made their first report on studies on expectation of life as an index of social progress.

They have found that the average expectation of life at birth in seven Euro-American countries increased from 41.06 in 1840 to 61.70 in 1930, an increase of 50.3 percent in ninety years. The seven countries for which data are available are the United States (represented by Massachusetts), Denmark, England and Wales, France, Netherlands, Norway, and Sweden.

Government efficiency and honesty, they report, are reflected by high expectations of life. Where governments are corrupt, badly organized and inefficient, the health departments and hospitals are likely to be failing in their tasks, while the water and milk supplies are likely to be contaminated by disease-bearing bacteria. Good health and low death rates reflect a well-educated and informed public. They have found that high expectation rates reflect good working conditions, long life, good health, high scale of living, efficient government, and effective education.

These two anthropologists have further deduced that the trend of urban expectation of life has been much more steeply upward than that of rural areas; and, also, if expectations derived from prehistoric skeletons and from ancient tombstones are even approximately correct, expectation of life has increased as much since 1800 as it did during the preceding fifty thousand years. They see expectation of life at birth increased to betwen 69.14 and 72.28 years, and conclude:

"To accept seventy to seventy-five years as an ultimate limit, however, would be to assume that the span of human life has an inherent maximum which it is impossible for science to transcend. If and when cancer is conquered, if and when the reasons are discovered for aging organisms made up of cells which under favorable conditions remain immortally young, if and when new basic discoveries like these are made, we may expect new and even more sweeping upsurges in life expectancy."

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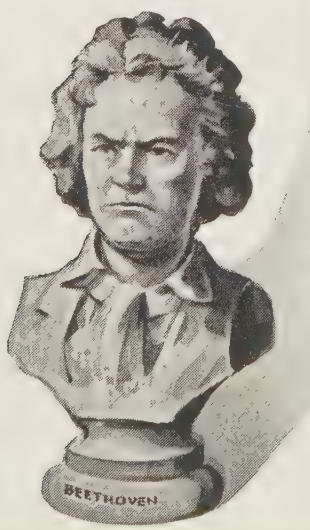

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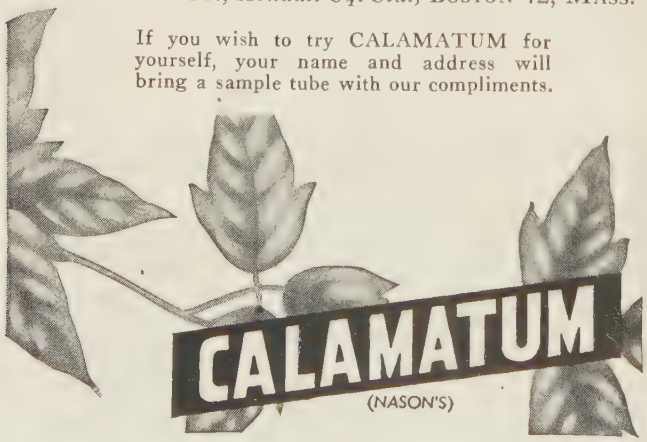

Cause and Prevention of Infantile Paralysis Epidemics

To the Editor.—

As the season for infantile paralysis epidemics is about to start, I should like to explain their cause and prevention. Overexposure to sunlight combined with physical exertion creates the susceptibility to the epidemic form of infantile paralysis. This theory of mine fully explains the fact that these epidemics occur in countries which, while enjoying the rich radiation of a Mediterranean latitude, adhere to the customs of the British Isles with their low rate of sunshine. The people in the United States and Australia have only to adopt Mediterranean habits, and cases of infantile paralysis will become as sporadic amongst them as they have always been in Latin America.

Alfred R. Ross, M.D., L.R.C.P.
New York, N.Y.

"Combat Fatigue" Misunderstood

Combat veterans who were neuropsychiatric casualties of war have been rehabilitated and reassigned to important duties in the Air Technical Service Command, as in other commands of the Army Air Forces, according to Col. John M. Hargreaves, ATSC Chief Surgeon, Wright Field, Dayton, Ohio.

"It is time the public is made to understand," said Col. Hargreaves, "the true significance of casualties labeled 'neuropsychiatric' and the fact that there is no reason why these soldiers cannot and will not, after proper treatment and cure, resume their places as confident, productive members of the AAF or of their civilian communities. Such understanding would be a very real aid to these men in recovering completely from their illness—for persons requiring neuropsychiatric care are sick in the same sense in which a person may become ill as the result of any other type of disease or injury, and as any other, this illness may have delayed effects."

Col. Hargreaves emphasized that a neuropsychiatric condition by no means implied lack of courage or stamina under fire on the part of the individual concerned. On the contrary, it was more likely to appear after his successful completion of an operational tour of duty and his return to this country. The fatigue, tension and anxiety he had undergone through a long period of abnormal stress then might result in his finding it difficult to readjust himself to changed conditions. The soldier had undergone frequent repetitions of fear, which the Army Air Force recognized and accepted as an entirely natural response to danger and insecurity, and no matter how well he had controlled that fear and directed it into courageous action, physical and psychological symptoms of the resulting illness might occur afterward.

Far from adopting a morbid attitude toward the veteran who needed neuropsychiatric treatment, Colonel Hargreaves said, we should credit him with the basic strength he had displayed under the terrible demands imposed upon him by war, and remember that he emerged from combat with assets as well as liabilities. Many of these rehabilitated soldiers are filling more responsible positions and performing more valuable services now than they did before.

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Natural Drugs Under Scientific Scrutiny

Plant drugs may be subjected to scientific scrutiny under a cooperative research program to be undertaken by proprietary drug manufacturers. It will represent the fourth such project sponsored by the Proprietary Association of America.

The first steps were taken when fifteen leading manufacturers and three houses engaged in gathering and marketing crude drugs, held an organization meeting recently in New York. Dr. Frederick J. Cullen, executive vice-president and medical director of the Proprietary Association, presided. Those attending agreed that a broad research program should be established for the purpose of making basic studies on the drugs and not upon the product containing them. It was also agreed that participation in the research program would not be restricted to members of the Association.

It was pointed out that scientific institutions will be asked to set up a research program to ascertain scientific facts concerning the various drugs and that these facts are to be published in recognized scientific journals. In some instances the facts may be unfavorable to certain preparations that are being marketed at this time, and if so, the manufacturer would have to give consideration to modernizing his product.

The new program is similar to three other cooperative research projects undertaken by members of the Proprietary Association. The Institute for the Study of Analgesic and Sedative Drugs has been functioning since 1938, and other research groups have investigated phenolphthalein and ammoniated mercury.

Preparations employing crude drugs have been used for centuries on an empirical basis, but the scientific data to support the usage is essential and it is necessary that certain corrections be made in the literature.

Industrial Psychiatry.—Dr. C. C. Burlingame, psychiatrist-in-chief at the Institute of Living, Hartford, Conn., in his annual report to the institute's board of directors, said that the psychiatric branch of industrial medicine had received a great impetus as a result of the war. Not only had doctors in industrial medicine a much wider range of clinical material, but two factors had caused the industrialists themselves to think about industrial psychiatry in a new way. There was the overemphasis on psychiatric casualties to be expected from the armed forces, which led some industrialists to believe that every man who went into uniform was coming back with a shattered mind, and war manpower shortage had taught that a man's emotional drives must be matched with the job at hand if maximum production was to be obtained. The industrialist saw that psychiatry could make a direct contribution to both his protection and his efficiency.

Surveys show that industry need not be unduly alarmed about an influx of psychiatric casualties, said Dr. Burlingame, but with its new recognition in industry he believed psychiatry could play an increasingly important rôle. He warned, however, that psychiatrists should stay on the job of private practice and running the psychiatric hospitals before listening to pleas for the application of psychiatric techniques to various social activities.

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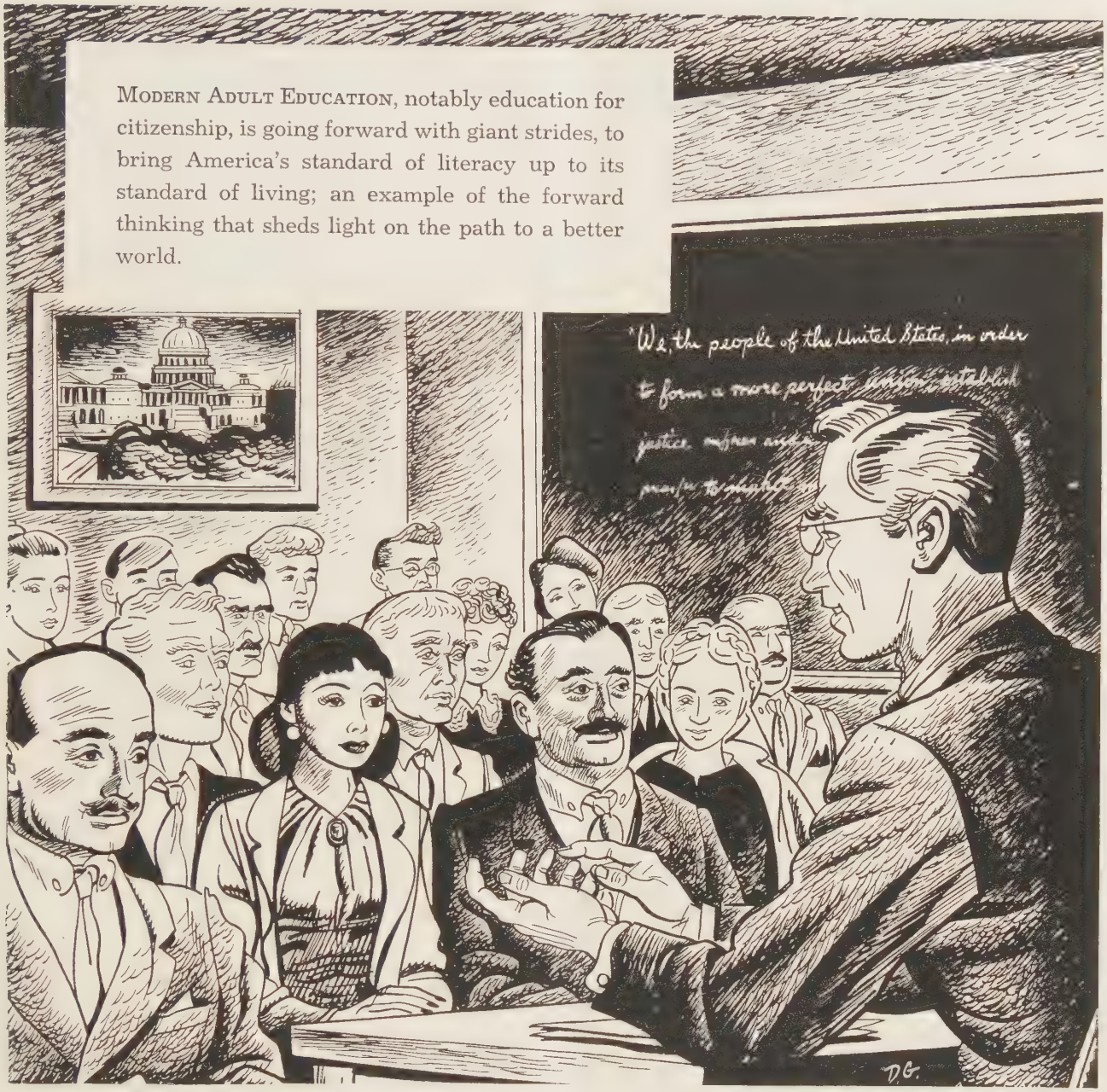

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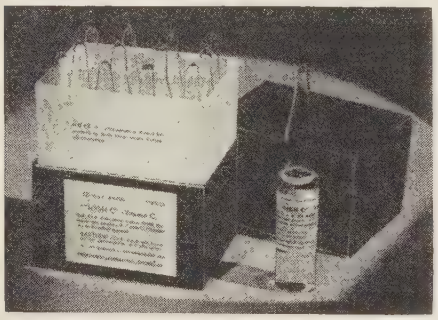

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True Inventors and Discoverers

The discoverers of such blessings as the use of fire, metals, navigation, writing, the alphabet, and even of speech itself will never be identified, says the *Bulletin of the Pan American Sanitary Bureau*. Harding has recently recalled, the writer continues, that even inventions generally attributed to certain individuals had previously been worked out, sometimes centuries before, by unknown or nearly forgotten men; as was the case with the theory of evolution, with smallpox vaccination, the discovery of oxygen, of anesthesia, of gunpowder, and so forth. In medicine, before Pasteur, Spallanzani (1768) and Redi (1671) had effectively refuted the theory of spontaneous generation; the theory of the transmissibility of tuberculosis had been developed by Klencke (1846) before Villemin (1868), and its practical application had been undertaken by the Spanish rulers almost a century before that; the bacterial doctrine of Koch and Pasteur had been anticipated by Henle (1850), Plenciz (1762), Kircher (1658) and even Fracastor (1546); Columbus and Servet visualized the circulation of the blood a century before Harvey described it; and Holmes (1842) disclosed the contagiousness of puerperal fever before Semmelweiss (1861); Cortezo (1903) mentioned the role of the louse in typhus before it was demonstrated by Nicolle (1909); and many other instances could be cited. The chains of science are long indeed, and must be forged link by link through centuries before a single one is completed; so that when fame casts its nimbus around some fortunate person, he would do well to remember how much he owes to his humble and even nameless predecessors.

Incidence of Infantile Paralysis

Dr. Don W. Gudakunst, medical director of the National Foundation for Infantile Paralysis, Inc., announced on June 1st that a recapitulation of available figures showed that the number of cases of poliomyelitis in the United States was about fifty percent more than a year ago. As of mid-May, the number of new cases this year were 642 as compared with 424 cases for the same period in 1944.

Sharp increases had been reported, he said, in the New England states, Middle Atlantic states, South Atlantic area, and the East South Central states. In the Pacific Coast and West South Central areas, which had been hard hit during the past two years, there had been a noticeable drop in the number of new cases. The remainder of the country was running about the same as last year.

Dr. Gudakunst pointed out that while there were fifty percent more cases in the country this year than in the same period in 1944, this was not an alarming situation but it should be watched carefully. He also stated that The National Foundation, based on its experience of assisting in severe outbreaks of infantile paralysis during the past years, was in splendid condition to render real service to medical and public health authorities in an epidemic of infantile paralysis wherever it might occur.

As a further aid in the fight against infantile paralysis, the Foundation is distributing thousands of bulletins entitled *When Polio Strikes,* which contains simple precautions to be taken during the summer months.

Shells of Mercy

Not shrapnel, not armor-piercing steel—but sulfas, penicillin, analgesics, and surgical supplies go into these shells of mercy. Fired to soldiers fighting in isolated pockets, they help keep open that vital life line of medical aid.

● Behind this and countless other new developments in the care and treatment of our fighting men is the military medical man. His "war" goes on even when the guns are silent. His hours are long. His rest periods are few. Very often they are limited to moments with a cigarette. And more than likely the cigarette is a Camel, for Camels are a service favorite around the world.

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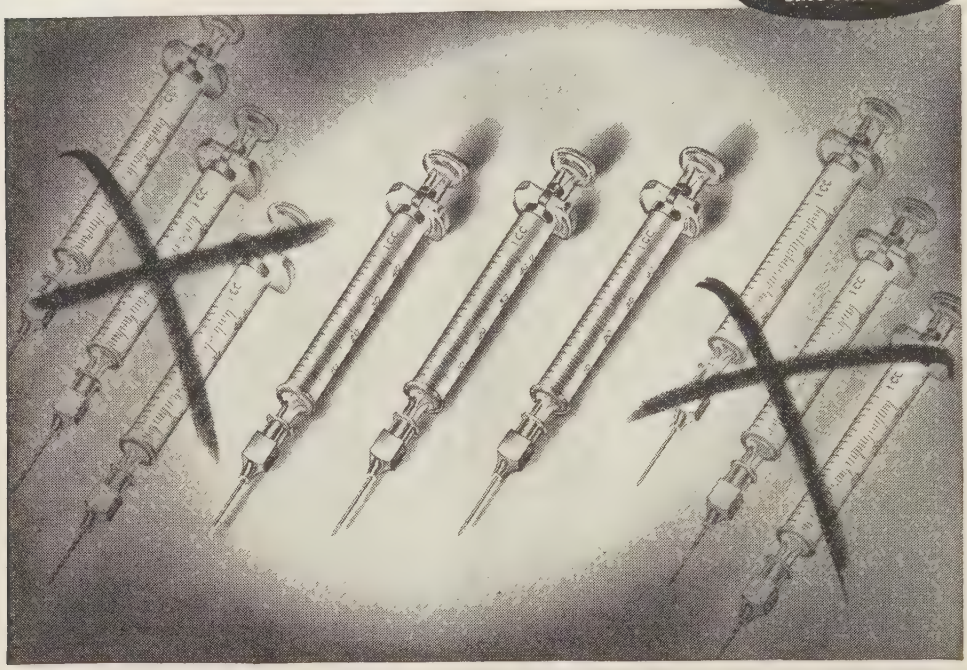

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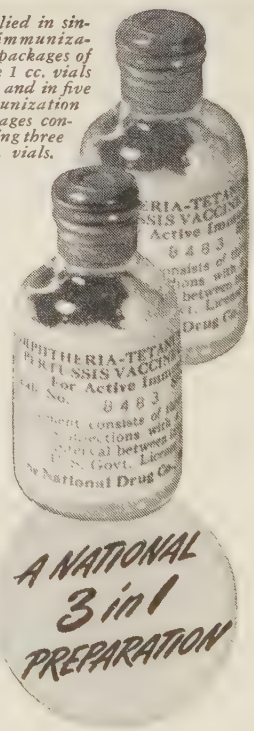
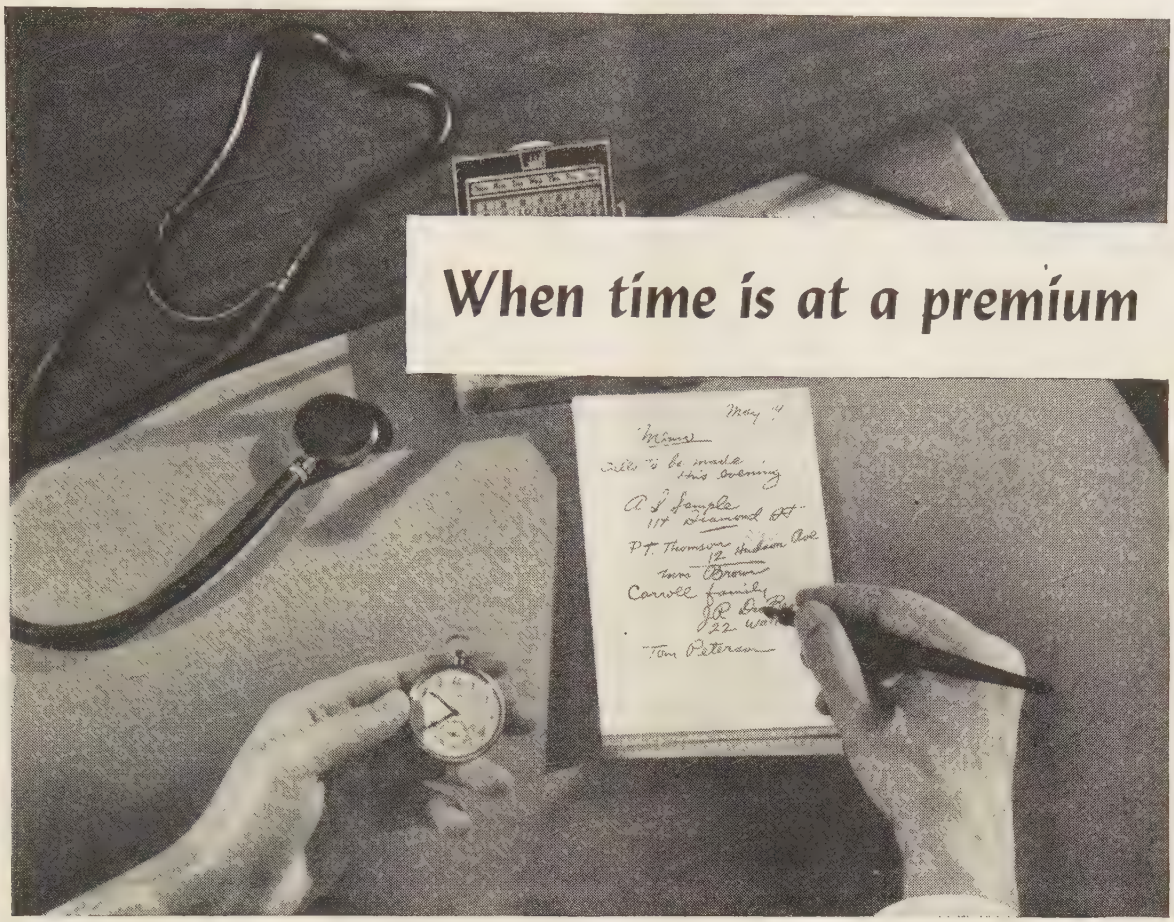
Supplied in single immunization packages of three 1 cc. vials each and in five immunization packages containing three 5 cc. vials.



DIPHTHERIA-TETANUS-PERTUSSIS COMBINED A. P.



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Therapeutic doses of Pyridium may be administered with complete safety throughout the course of cystitis, pyelonephritis, prostatitis, and urethritis.

RAPID RESPONSE

Prompt, *gratifying* relief of distressing urinary symptoms is the characteristic response to Pyridium therapy.

More than a decade of service in urogenital infections

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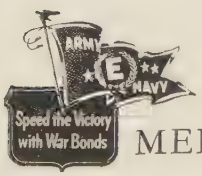
(Phenylazo-alpha-alpha-diamino-pyridine mono-hydrochloride)

Pyridium is the United States Registered Trade-Mark of the Product Manufactured by the Pyridium Corporation



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CROOKES

PRESCRIPTION PRODUCTS

Critique

Pneumonia *Science,* April 12, 1929, demurely remarked there were eleven existing types of pneumonia. How's the count, now, doctor?

Vitamins in Green Plants One of the earliest pieces of work wherein the vitamin A content of a plant was definitely associated with greenness of the plant tissue concerned asparagus. John W. Crist and Marie Dye did the work (*Journal of Biological Chemistry,* March, 1929). It was found that, while green asparagus contained enough vitamin A to promote health and growth in albino rats, rats on bleached asparagus died for lack of vitamin A as rapidly as the controls.

Eugenics E. S. Jennings, reviewing Thomas B. Rice's *Racial Hygiene,* in the *Survey,* April 15, 1929, found the statement that "effective segregation or sterilization would probably reduce the number of defectives to one-half in a single generation", and declared this sanguine remark to be without biological foundation. Rice argued also that the "melting pot" does not melt, that you cannot fuse races, and that racial mixtures are biologically harmful. Jennings declared this statement also "utterly unfounded".

Baby With Tail A baby born in Knoxville, Tenn., was reported in *Science* of November 16, 1928, to have been born with a tail seven inches long. This was not a record. The record was held by a twelve-year-old boy in French Indo-China who had a tail nine inches long. There were at the time records of twenty-five authentic cases of tailed humans. Most shed them in embryo. Sometime during gestation we all have tails at least a sixth as long as our bodies. There's one for Darwin and Bryan to talk over on the Styx.

Animal Self-Preservation and Therapy The story, told by Pliny, that beavers bite off their testicles to compound for their lives when pursued, sounds phoney. Nor is it the beaver's testicle that carries his perfume, but a pair of glands just within the fundament, sweet as musk, which render the dung fragrant and communicates a strong scent to the testicles by proximity. It is true that several creatures have a strong instinct of self-preservation, the Egyptian frog for instance, which, according to Elian, will carry a whole joint of reed across a stream in its mouth in order not to be swal- followed by the ibis. And this long-necked fowl gives itself an enema with its beak every time it finds itself too costive or feverish. (I'm getting so I can't believe this, CRITIC.) The dogs of Egypt are also said to lap the water of the Niles at full trot so that they may not be snapped up by crocodiles. Both beavers and wolves will, when one of their legs gets caught in a trap, bite it off in order to escape. The flesh of beaver is tough and dry but the tail, like the parrot's tongue, was one of the far-fetched rarities Heligobalus used to furnish on his luxurious table. If you don't believe all this, read Byrd's *Journey to the Land of Eden,* and maybe you will still not believe it. THE CRITIC

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For Relief In

PEPTIC ULCER, PYLOROSPASM, FLATULENCE, SPASTIC COLON BILIARY AND RENAL COLIC

Mesopin is a selective antispasmodic whose action is especially directed toward the gastrointestinal tract. Its spasmolytic effect is similar to that of atropine, but without objectionable side actions.

Mesopin with Phenobarbital is available for gastrointestinal disturbances associated with nervous instability. This formula combines both local and central action for the relief of pain due to spasm.

ENDO

MESOPIN

Each tablet of Mesopin contains 2.5 mg. homatropine methyl bromide. Mesopin with Phenobarbital contains, in addition, 20 mg. phenobarbital. Mesopin and Mesopin with Phenobarbital are available in bottles of 20, 100, 500, and 1000 tablets.

ENDO PRODUCTS INC. **Richmond Hill 18, N. Y.**

AMONG MY BOOKS—AGAIN

THE HONOURABLE WILLIAM RENWICK RIDDELL

Toronto, Canada

(*Concluded from page 342*)

New Microscopical Discoveries: Containing Observations. London, 1745. 12 mo. Pp. 126.

Turbervil Needham, otherwise unknown to fame, in 1745, published this little volume, dedicated to the President and Members of the Royal Society. It contains six papers, containing what the author considers interesting and important facts disclosed by the modern microscope. The first deals with the calamary, the squid as we call it; and a full description of its anatomy is given. The next is on the *farina fecundans* of vegetables —we call it pollen. It is justly compared to the semen of the animal. The third is on the pistil, the uterus—we say stigma—and stamens of flowers. The fourth is on the curious phenomenon of what is called an embryo sole of the family of shrimps. The fifth is on supposed "eel in blighted wheat", really smut, while the sixth deals with certain curious particulars relating to the natural history of animals, plants, etc. This last is about the only interesting portion of the book—we have the eggs of the thornback, the barnacle, etc. The book is now valuable only as a curiosity.

Pharmacopœia Extemporanea: sive Praescriptorum Sylloge. By Thomas Fuller, M.D., Londini. MDCCI.

The author of this pharmocopoeia (in Latin) was Thomas Fuller (1654-1734). A native of Sussex, he was educated at Cambridge, graduating M.B. in 1676, and M.D. in 1681, having in the meantime become, 1679, an extra-licentiate of the College of Physicians of London. He practised at Sevenoaks with much acceptance. He published three Pharmacopoeias all in Latin, as well as other medical works one of which had some vogue, *"Exanthematalogia;* or an Attempt to give a rational account of eruptive fevers, especially the measles and smallpox". London, 1730.

He gives hundreds of prescriptions, all in Latin, all "extemporaneous", that is, not the standard preparations of the apothecaries. Many of them are amusing and more are interesting. Take, for instance, "Aqua Limacum Scorbutica", made of snail shells and orange peel, and useful for "erratic scorbutic fever, shooting pains, marasmus and night-sweats"; or "Aqua Millipedum", water of thousand-legged worms, made of millipedes, lemon and orange peel with other ingredients, and "of use in diseases of the head and nerves, arthritis, hypochondriasis, asthma, scrofula, purifying the blood and moving the urine".

Or how does *Pulvis Pavonica,* peacock powder, suit the present profession? The prescription is simple:

Sterc. Pavon.....gr. xv.
Sal. Succini.....gr. v.
Ol. Nuc. Mosc.....gr. j.m.

We are assured: "Specifice valet contra Vertiginum. Exhibeatur vesperi et mane, cum haustu Decocti Cephalici"; or, in English: "It is specially effective against vertigo. It is exhibited, evenings and morning, with a draught of cephalic decoction". This cephalic decoction is made of a dozen ingredients including guaiacum, and is "usefully prescribed for affections of the head and nerves, colds, catarrhs, apoplexy, epilepsy, torpor, paralysis, etc., ad ℥ iiij bis in die".

Then, if you want a nice collyrium, why not take the "collyrium vitriolicum?" The prescription is simple:

Vitrioli albi.....gr. iiij
Aq. Sperm. Ranar.....℥ j.m.

This refrigerates, dries, deterges; it is efficacious for ophthalmia, epiphora, ulcers; and if you do not know the last ingredient, you may be told that it is water filled with frog-sperm.

Sometimes, a good epithema is wanted, they call it nowadays a topical application; here is a real good one:

Lact. Muliebr.
Album. Ov.....aa ℥ j
Opii.....3 ss.
Camph.....gr. v.m.

This is first-class for wakefulness, headache, fever delirium arising from heat of the blood and its rarefication; it cools the blood and soothes the spirit. A very nice fomentation for hernia is easily made.

Sterc. Ovil. c.v. coq. in Lact. Vacc. or in plain English, "Take sheep dung and boil in cows' milk". We are assured that "This fomentation is very useful, inasmuch as it can readily reduce the intestine distended by flatus and infarcted with indurated faeces. Etmuller gives his word of honour that "very often when things seemed to be critical, I replaced the prolapsed intestine with this lotion without using other means", and Etmuller was not only celebrated, but a man of truth.

For a good cataplasm, how would this do?

Farinas secales.
Sterc. Columb.....aa ℥ j.
Aceti.....q.s.m.

Or as the moderns would put it: Take of rye flour and pigeons' dung, each one ounce; of vinegar the necessary quantity and mix. This, we are assured, helps effectively in herpes.

The enema was a favourite treatment at this time; I shall give a sample. The enema nutriens was as follows:

Juscul. Intestinor. Ov.....℥ x
Vitel. Ov.....No. iij
Vini Canar.....℥ iij
Succi Chermes.....℥ ss. m.

The first ingredient is the juice of sheep's intestines, the second, yolk of egg. The author says (in Latin) "some deny that this enema is nutrient; on the contrary, I myself, say this with truth: One, because the colon has lacteals though, it may be, few; two, I have often noticed that the enema de Malicorio (of which we are given the prescription) being injected is retained twenty-four hours and more, and shortly afterwards, there was a defaecation, almost solid; three, Peter Borellus saw a certain woman inebriated from wine injected; four, according to Hildanus, a woman for six weeks took almost nothing by the mouth but she was so effectively nourished by clysters that being pregnant, she carried the foetus to the regular time and was successfully delivered. More can I add to prove as I think, the benefits of this nutritive enema."

What is called the Japanese drink, "Haustus Japonicus", contains frog-spawn water, and is "marvelously potent against vomiting of blood, excessive menses and any internal haemorrhage. A medicine to clear the brain contains peacocks' dung and contused millipedes: a nice drink is made from one hundred river crabs pounded alive; vipers are recommended for jaundice."

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SIMPLE AND EFFECTIVE • Demerol hydrochloride is administered orally or by intramuscular injection. Average dose: 100 mg., when the pains become regular, repeated three or four times at intervals of from 1 to 4 hours. In analgesic power Demerol hydrochloride ranks between morphine and codeine; it also has a spasmolytic effect comparable with that of atropine, as well as a sedative action. It may also be used in conjunction with scopolamine or barbiturates for amnesia.

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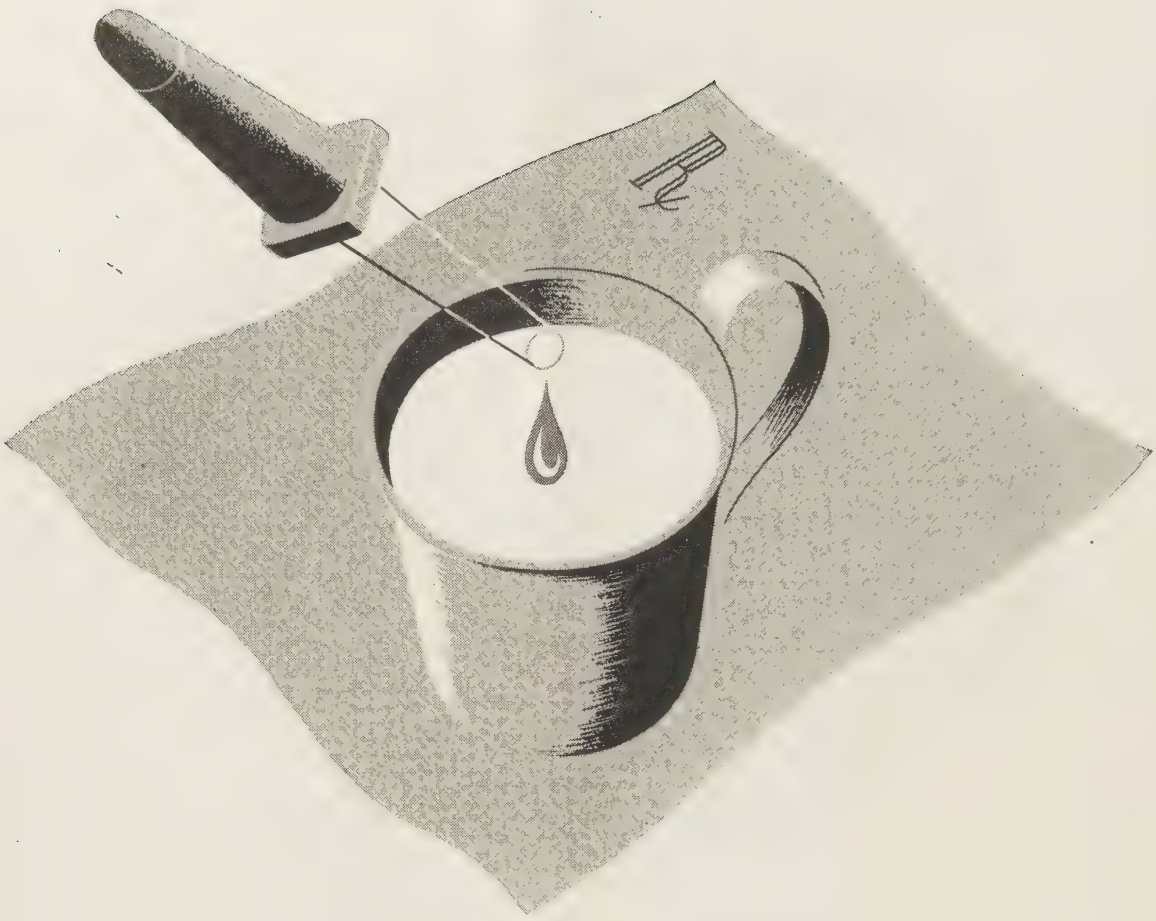

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Vi-Penta Drops 'ROCHE'

MEDICAL RECORD

PUBLISHED MONTHLY BY
THE MEDICAL JOURNAL AND RECORD PUBLISHING CO., INC.

VOL. 158, No. 7 JULY 1945 WHOLE No. 2750

MIDDLE LIFE AND OLD AGE

JACOB SMITHLINE, M.D.
Brooklyn, N.Y.

Man is an embryo, egg, infant, child, adolescent, adult, and old man in that order. Infancy, childhood and adolescence last about eighteen years; maturity and old age fifty or sixty years. Thus, man consists of a brief period of development and of a long period of completion and decay.

Middle life is that period between the fortieth year and old age. The terminus of the latter is not fixed. One person is old at fifty while another is still middle aged at seventy. Sixty years may be taken as an approximation of the average; but heredity, social conditions, occupation, habits, personality, climate, the vicissitudes of life, all have much to do with the advent of the time when degenerative changes will henceforth predominate. In the course of life, the tissues undergo important alterations. They lose much water. The organs acquire more rigidity. Arteries become hard. Circulation is less active. Profound modifications take place in the structure of the glands. Their secretions are less rich. The cells regenerate more slowly or not at all. Such changes occur at various rates, according to the state of the organs. Certain organs grow old more rapidly than others. Such regional senescence may affect the arteries, the heart, the brain, the kidneys or any other organ.

Longevity is much greater when the elements of the body grow old in a uniform way. If the skeletal muscles remain active when the heart and vessels are already worn out, they become a danger to the entire body.

The youthful functioning of any anatomical system, whether sexual glands, digestive apparatus, or muscles, is dangerous for middle life and old age. Longevity is a vascular question which has been well expressed in the axiom that "a man is as old as his arteries".

To a majority of men death comes primarily or secondarily through this portal. The onset depends in the first place upon the quality of arterial tissue (vital rubber) which the individual has inherited and secondly upon the amount of wear and tear to which he has subjected it. More commonly hardening of the arteries result from the bad use of good blood vessels.

The arteriosclerotic subject presents certain phenomena that are common to all cases. He shows evidence of general asthenia, being readily fatigued by exertion, and sweating readily without adequate cause. The countenance is pale. He has a tendency to giddiness and loss of intellectual acumen. There is also loss of weight. In hardening of the arteries of the brain (cerebral sclerosis), there are symptoms of vertigo, intellectual torpor with loss of memory for recent events, irritability, darting head pains, aphasia, somnolence, ringing in the ears, numbness of a limb or limbs (one sided) and severe occipital headache.

High blood pressure should be regarded more in the light of an important early symptom and also as a valuable danger signal in advanced cases, than as a causal factor of the disease, bearing in mind, however, that in some people it is compensatory.

An individual may have far advanced hardening of the arteries of the brain, heart or kidney, without marked change in the systolic blood pressure, or it may even remain normal; in some cases there is, after the initial period of hypertension, persistence of the same pressure, while in another class of cases there may even be low blood pressure.

Any forecast of the course of hardening of the arteries must be based upon a thorough inquiry of the patient's entire history, including his occupation, his habits, the diseases which he has had, his constitutional strength, his physical training and disposition in earlier years, and, more remote than these, his inheritance. In no other process does inheritance, the character of the individual, his disposition, temperament and circumstances play such an important rôle.

In treating arteriosclerosis the physician must take the symptoms of exhaustion as a guide; study the patient's mode of life and persuade him to lead a life well within the limits of his strength. Thus, in the case of the heart, the first sign of exhaustion is a sensation of distress and pain or breathlessness. The onset of this sensation should be a signal for diminished effort, and if the patient will but recognize his sensations, he will have a safe guide as to the amount of effort he can undertake. The same principles are applicable to the treatment of other organs when the exhaustion is induced by insufficient blood supply.

If excessive work is imposed on any part of the body, even in individuals whose tissues are isochronic, aging is accelerated. An organ which is submitted to overactivity, toxic influences, and abnormal stimulations wears out more quickly than the others.

Some persons are fortunate. They enter upon a well-balanced old age, in which the heart is "just as strong" as the stomach, and the kidneys function as actively as

the brain. In others, one or another of the organs begins to fail prematurely or fails with disproportionate intensity of rapidity.

The pseudo-young men, who play tennis and dance as though they were still about twenty years old, who discard their old wives and marry young women, are likely to suffer softening of the brain, and are subject to diseases of the heart and kidneys. Sometimes they die suddenly in their beds, in their offices, on the golf-links, at an age when their ancestors were still tilling their lands or managing their businesses with firm hands. The causes of the failure of modern life are not exactly known. Indeed physicians cannot be held responsible for it. It may be said that the premature aging of modern men is probably due to worries, lack of economic security, overwork, absence of moral discipline and excesses of all sorts.

The aging man should neither stop working entirely nor retire completely. Inaction further impoverishes the content of time. Too much leisure is even more dangerous for the old than for the young. Appropriate work should be given to those whose forces are declining so that they do not have excessive rest. If one's days are filled with mental and spiritual adventures, they glide by much less rapidly. They may even have the plentitude of the days of youth.

Senescence seems to be delayed when body and mind are kept working. In middle and old age, man needs a stricter discipline than in childhood. The early deterioration of numerous individuals is due to self-indulgence. The same factors that build up the young man are apt also to prevent the tearing down of the old. A wise use of these psychological influences would retard the decay of many men and the loss of their intellectual and moral treasures which might otherwise sink prematurely into the abyss of senile degeneration. The most gifted and intellectual personalities show a relatively slower degeneration with the onset of old age. Generals of advanced years have carried their armies to victory against heavy odds. Matters of national and international policy are usually entrusted to "elder statesmen". It seems reasonable to conclude that a lifetime spent in activity, creation and self-development need never cease to be fruitful if good health is present. Old age has its elite. To them belong good health, well balanced temperaments, a serene and contented perspective of the past, and a life habit of thought and creative activity. For them age can have no terrors, only a great pride in achievement. To them death is but the gentle termination of a life well spent.

In treating senile patients, the physician must remember, that the patient is old, and to disregard the benefits of bed-rest, pneumonia may intervene or if the diet is left unchanged the onset of edema may occur or, other troubles may set in if the usual medications are neglected or misused. A great authority once said that "the entire art of prolonging human life consists in not shortening it".

From the time of Hippocrates, the physician has always stressed moderation, work, personal hygiene and equanimity as the ingredients of the successful formula for achieving and maintaining a happy old age.

A well ordered regime lays primary emphasis on moderation in eating and drinking and the necessity for a degree of leaness. Meals may be frequent but small. Overeating is dangerous and may cause sudden death. The abuse of alcohol, tobacco and condiments is contraindicated. There is no reason why one should not enjoy an after-dinner cigar, wine or coffee, if his digestion, his heart and his sleep are not disturbed by them.

Physical and mental work must be moderated. Those of middle life and old age must learn to respect the feeling of fatigue and not persist in spite of it and attempt to establish new records. The old adage "To rest is to rust" is a truism that should never be forgotten and it applies equally to work and play. The continuation of the regular occupation aids preservation in general, while there is ample evidence that premature retirement shortens life. As occupation conserves mental vigor, physical exercise prevents the atrophy (wasting away) of inactivity and preserves the musculature (function). Walking and golfing, in suitable attire, are forms of exercise admirably suited to advancing years. Fresh air stimulates the skin and ventilates the lungs. When exercise becomes too fatiguing and is accompanied by chest pain, it should be reduced or modified. The daily cold bath or shower may be continued, if it has been part of the regime, but it is highly inadvisable to introduce it as an innovation. If it is no longer tolerated, the temperature of the water may be raised, but, whatever the temperature, a good rub down should always follow the bath. A cheerful disposition is an asset that is invaluable in senility. The ability to keep young requires training and exercise.

Sexual vigor ranges widely among individuals in old age, tapering off in most cases to quiescence, surviving with impressive vitality in others. Sexual overactivity, prompted by either marital or extramarital relations, often causes rapid aging and loss of potency.

Sleep, though it may vary, is usually short, and should be helped along by a regular retirement hour, after a light evening meal and by induction of mental rest or pharmaceutical aid.

Clinical and experimental studies of metabolism and the influence of vitamins open up new avenues in the aging process. Low caloric and unbalanced diets, weighted by large quantities of vitamin B and potassium and sodium phosphate, have successfully prolonged life in animals. The appetite-stimulating properties of vitamin B_1, as well as its tonic effect on the gastrointestinal tract, make it a valuable adjuvant in the treatment of the senile. I strongly advocate the use of the vitamin B complex in middle life and old age. Even where no deficiency is apparent, the vitamins are helpful. It is a good dietary supplement.

Constipation is a common phenomenon in middle life and old age. It is often obdurate, persisting for days with much discomfort, and refractory to the accepted measures. It may appear spontaneously or follow a dietary indiscretion. To alleviate the condition a half glass of prune juice in the morning and another before going to bed works well. A fruit salad and a daily enema are also helpful.

If pharmaceutical aid is necessary in constipation one may use glysennid, which is especially indicated and useful in elderly people. A tablet one hour after the evening meal works well as a mild laxative. The rapid nervous tension of our lives, hygienic errors, worry and hurry will bring about their own punishment and premature old age, or a shortened life will be the result.

The degeneration of the ductless glands in old age usually produces a condition of autointoxication with a decline of the antitoxic power which is shown by the adrenal glands.

Death can be deferred and old age prolonged if wear and tear are balanced by a proper regime and if disease is avoided and carefully treated.

It is mainly our fault if we become senile at an early age and die before we reach one hundred years.

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DIETETICS IN DISEASES OF THE STOMACH*

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Dietetics, or the doctrine of nourishment, has played an important part in the treatment of the sick ever since the time of Hippocrates; but although the dietetics of the diseases accompanied by fever have not changed much in the principal points, new rules and principles regarding nutrition in chronic diseases have been introduced of late. This has reference especially to diseases of the stomach, that branch of internal medicine which in the last two decades has shown so much unlooked for progress. As the therapeusis of diseases of the stomach has to deal with dietetics principally, I thought it would be of interest to discuss this subject. It may be expedient to divide the subject into three parts:

1. General rules of dietetics in diseases of the stomach.
2. Dietetics in acute diseases of the stomach.
3. Dietetics in chronic diseases of the stomach.

1. General Rules of Dietetics in Diseases of the Stomach

Within the past two years important facts have been discovered which are of the greatest value in the treatment of diseases of the stomach, and the influence of which can be perceived like a red thread through the whole chapter of dietetics. It has been shown by von Noorden (1) and others that emaciation in chronic diseases of the stomach is caused in the largest majority of cases—if, perhaps, not in all—not by specific poisons circulating in the organism, but by a smaller amount of food being taken. On the other hand, one might expect, judging from the universal law existing in the plant and animal kingdom of vicariousness or replacement, in case of inability, of the work of one organ by another similar one, that in grave disturbances of the digestive functions of the stomach, the intestines would do the work instead. This has been proved, experimentally as well as clinically, in the most infallible way. Several authors (Leube, Ewald, von Noorden) have observed that in the cases of atrophy of the mucous membrane of the stomach, in which, as you all know, the gastric secretion has entirely ceased, the patients can maintain their usual weight. From my paper on achylia gastric (2) it is clearly seen that the patients can do very well without gastric secretion; under a proper regimen they can even gain in weight, and live long without any discomfort whatsoever. That means that even after the loss of the entire chemical action of the stomach, the gut is completely able to replace the function of the stomach.

These two facts, first, that the emaciation in chronic diseases of the stomach is caused by too small a quantity of food, and second, that even in grave lesions of the gastric functions the gut appears to perform vicariously the digestive work in a complete way, are of vital importance for the doctrine of dietetics, for it is seen at a glance that the main object of nutrition of the sick consists in giving them sufficient quantities of food. Before proceeding, it is necessary to review briefly the normal physiological nutrition of man. We perceive quickly that there is a great variety in the food of healthy persons with regard to the quantity as well as to the different food substances. Nevertheless, they all contain the three groups of foodstuffs—albumin, carbohydrates, and fats. Thus, for instance, vegetarians live and thrive principally on vegetables, and the Eskimos, on the other hand, almost exclusively on an animal diet.

The golden path, however, lies intermediate, and all authors (Voit, Pettenkofer, Hoffmann, Forster, and Gruber) recommend a combination of animal and vegetable food. R. Virchow, likewise, is of the same opinion, and expresses himself regarding this question as follows: "Although the Kirghez and the Eskimos show us that health and life can exist through many generations on an exclusively nitrogenous diet—other tribes (Hindoos) live principally on nonnitrogenous food—still history shows us that the highest attainments of the human race have emanated from nations who have lived and live on mixed diet." A mixed diet, taken partly from the vegetable and partly from the animal kingdom, is the most suitable form of nourishment. We obtain the greatest amount of carbohydrates from the vegetable kingdom, while a great deal of the albumin is derived from animal food. The relation between animal and plant albumin, according to Munk and Uffelmann (3), should not be less than three to seven. As regards the quantity of food, according to the same authors, an adult doing a medium amount of work requires daily one hundred and eighteen grams of albumin, fifty-six grams of fat, and five hundred grams of carbohydrates.

Food in small portions only serves the purpose of reconstructing tissue waste; in its largest part, however, it is used for generating the heat requisite for the maintenance of life. For that reason it is customary to speak of the necessary amount of heat units during twenty-four hours instead of the quantity of food. By "heat unit" is meant, as is well known, that quantity of heat which is required to raise the temperature of one gram of water one degree Celsius. "Great heat unit" means the amount of heat required for warming one thousand grams of water one degree Celsius. Each kind of food is ultimately oxidized in the body to its end-products, and is in greatest part exhaled in the form of carbonic acid; the more carbon atoms food-stuff contains the more heat-units it will generate. In speaking of the heat value of food, the great heat units are used,

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the term "great", however, being omitted. Thus one gram of albumin generates 4.1, one gram of fat 9.3, and one gram of carbohydrate, 4.1 heat units. If we know the quantity of nourishment taken, the amount of the introduced heat units is easily determined by multiplying the different food stuffs by the figures given above. The daily amount of heat generated by the body, or necessary for the maintenance of the same, has been approximately estimated at 2,500 heat units (4). The heat value of the food taken by an average working person, according to von Noorden (5), amounts to about forty heat units when working, and when resting to about thirty-four heat units per kilo a day. According to K. Vierordt (6) an adult takes in the form of food a daily average of 120 grams of albumin, 90 grams of fat, 330 grams of carbohydrate (the relation of the nitrogenous foodstuffs to the nonnitrogenous being one to four), and 2,818 grams of water. The abovementioned figures differ from those given by F. Hirschfeld (7). This author demands eighty grams of albumin as the lowest amount contained in a sufficient diet. Victuals are composed mostly of all the three food groups (albumin, carbohydrate, fat) and water, and contain in minute amounts the inorganic salts found in the body.

In order to have a correct idea of my own about the quantity of nourishment taken daily, I carried out tests for two successive days on my wife and myself. The results showed that great differences exist in the quantity of food taken by people in their normal condition in order to make up the daily loss. One maintains his balance at a rate of twenty-six heat units per kilo a day; the other may lose in weight at thirty heat units per kilo a day. The scale is the best guide as to whether a certain amount of food is sufficient or not. It shows quickly and with certainty whether the organism maintains its balance or not.

After this lengthy dissertation on the diet in health, let us return to the sick.

As people with disturbances of the stomach have to replace for their existence no smaller losses than under physiological conditions, they will therefore need: 1, just as large amounts, and 2, the same kinds of foodstuffs as described for the normal state. The only difference possible will have reference to the selection of the various articles of diet and to their form and special preparation.

Thus the question arises, What qualities should the food of stomach patients possess?

In the treatment of a diseased organ one can often make use of two methods. One consists in sparing the diseased organ and giving it perfect rest, the other consists in strengthening the same by methodical adaptation for more work and practice. Both principles are in fact realized in the treatment of diseases of the stomach. The first method is ordinarily applied in acute diseases and only very seldom (and then only for a short time) in chronic affections of the stomach. In these latter the second principle, as a rule, is used. The stomach can be spared, firstly, by not introducing into it any food whatever (greatest degree of saving or rest); secondly, by administering food substances which, during their stay in the stomach do not impose much work upon this organ, and do not greatly irritate it. Here the main object will be to give the patient easily digestible food. In turning from the saving principle to that of strengthening the organ by methodical adaptation for work, it will be quite natural to change the diet, not suddenly, but gradually, into such as requires more work on the part of the stomach for its digestion. It is therefore absolutely necessary to have an exact table of the digestibility of different foods. In prescribing or changing a diet we shall have to act according to it. Such a scale has been arranged by different authors. The main sign of digestibility was gauged by the rapidity with which the various food-stuffs passed out of the stomach into the intestines. Beaumont in many trials on his patient with the gastric fistula determined the length of time the different victuals remained in the stomach and constructed a scale according to the figures obtained. On the same principle, but more reliable and of greater value, is the scale constructed by Leube, according to the results obtained by emptying the stomach by means of a tube, after different kinds of food had been taken. We think it might be useful to give Leube's scale:

Diet Tables

1. Bouillon, Leube-Rosenthal's meat solution, milk, soft or raw eggs, zweiback, English cakes (biscuits containing no sugar), water, natural acidulous waters (Apollinaris, Kronthaler, Seltzer, etc.).

2. Boiled calf's brain, boiled calf's sweetbread, boiled chicken (young, without the skin), boiled pigeon, boiled calves' feet, tapioca pap boiled in milk, beaten white of egg.

3. Raw beef (chopped very fine), raw ham (chopped very fine), beefsteak (superficially fried in freshest butter), finely scraped tenderloin of beef, mashed potatoes, white bread (stale), coffee with milk, tea with milk.

4. Fried chicken, fried squab, roast venison, guinea hen, roast beef (cold), roast veal (leg, saddle), boiled pike, macaroni, rice pap, finely chopped spinach, asparagus, stewed apples.

These tables, however, have not as yet, on the one hand, been fully verified on healthy individuals, or found always alike (giving the same results); on the other hand, such experiments only show what food remains in the stomach the shortest time. This would perhaps give reason for presuming what food may be easily digested as far as the stomach is concerned, but not what is easier digested as a whole, i.e., made use of for the economy of the body with the smallest amount of work. The digestibility of food substances depends firstly upon their shape and quality; secondly, upon their percentage of convertible material.

"Corpora non agunt nisi fluida" is an old, well known axiom. Following this law one could arrange the following scale of digestibility, which is constructed according to the different physical conditions of the food:

1. In the first place, food in liquid form: (a) Liquid at ordinary temperature—milk, meat juice, beef-tea, bouillon, peptone or sarcopeptone dissolved in water, breadwater, strained barley, oatmeal, rice-water, strained oyster soup, egg albumin-water; (b) liquid at body temperature—jellies, fruit jelly, calf's foot jelly, ice cream, water ice.

2. Food in pulpy form: The food is mechanically converted into very minute particles and well mixed in liquid—pap soups (barley, oatmeal, farina, rice, sago); egg in bouillon; Leube's meat solution; pulverized meat; pulverized crackers in milk, water or bouillon; buttermilk; kumyss; cream; butter.

3. Food which by slight trituration in fluids sepa-

rates into minute particles: White bread in milk or water; the tips of well boiled asparagus; carrots; mashed or baked potatoes; the yolk of hard-boiled eggs; oysters (raw).

4. Solid food: White bread, rye bread; meat, hard-boiled eggs, fish, cheese.

5. Substances not easily digested: Meat with tough fibre; lobster; sausages and Swiss cheese on account of their solidity; all substances containing much cellulose, principally when eaten raw; cold slaw; all salads, cucumbers, pickles, raw fruit, apples, pears, pineapple; fruit which contains much acid, therefore all unripe fruit; strawberries; substances containing much sulphur and forming gases in the intestines; cabbage and beans.

This theoretically constructed scale of the digestibility of food is, at the same time, in the main points, similar to the one which has long stood the test of empiricism and which I ordinarily apply in my practice.

Dietetics in Acute Diseases of the Stomach

The principle of rest here occupies the first place. In acute gastric catarrh one gives, during the first two or three days, in which, as a rule, there is a total loss of appetite, only a little nourishment in liquid form, containing principally amylacea, barley or oatmeal soup, bouillon, weak tea, water. As a rule, one must not force a patient to take food during the first or even during the second day of sickness. The anorexia in these conditions is a wise arrangement made by nature in order to give the stomach rest. If there is thirst, beverages may be taken in small quantities, and must be neither very cold nor very warm. As soon as the appetite reappears one may give some toasted bread or zweiback, milk, soft boiled eggs or oysters, permitting after a while small quantities of bread and meat, and then passing slowly to the ordinary diet.

Ulcer of the stomach.—During the rest cure of von Ziemssen-Leube give liquid diet, consisting principally of milk, for two or three weeks. As is well known, Cruveilhier (8) first recommended milk for the purpose, and even now there are some physicians who limit themselves to milk alone. As a rule, however, it is appropriate to allow, besides milk alone, milk in combination with barley, oatmeal, or rice-water. In addition to this, the different peptone preparations are here in place. I administer Rudisch's sarcopeptone, manufactured in this country, on account of its being palatable and highly nourishing. (The Rudisch's sarcopeptone contains forty percent of nitrogenous substances, including twenty percent of peptones.)

One may give most appropriately every three hours one to two cupfuls of milk with or without the addition of the above-named decoctions (four times daily) and sarcopeptone (twice daily). The patient must not drink these fluids, but eat them with a spoon. In case of hemorrhage of the stomach, during the first three or four days, it is not permitted to give any food whatever by the mouth; instead, the patient must be fed by the rectum. Ewald has proved that the large intestine has the ability of digesting and absorbing albuminates even without special previous preparation; therefore the following may be given as a nutritive enema:

1. Three to five eggs mixed with 150 cc. of sugar-water (30.0 of grape sugar dissolved in 150 cc. of water), a small quantity of common table salt added, and the whole mixture well beaten; a small quantity of starch solution or mucilage may be added.

2. One half pint of milk, with two eggs and fifty grams of grape sugar.

3. One half tablespoonful of Rudisch's sarcopeptone dissolved in a cupful of water.

The food enemata must be given three or four times daily. It is necessary that the fluid should be at the temperature of the blood, and that it should be injected by means of a fountain syringe and a soft rubber rectal tube. Each time before giving a nourishing enema a cleansing enema of 250 cc. of lukewarm water has to be administered, in order thoroughly to cleanse the large intestine and make it more fit for absorption. In case of thirst the patient is allowed to take small pieces of ice into the mouth from time to time. Three days after the disappearance of blood one slowly and cautiously begins the liquid diet.

Dietetics in Chronic Affections of the Stomach

Whereas, in acute disases of the stomach we paid most attention to giving rest to the organ—for here even an insufficient nutrition and the loss of several pounds of bodily weight are not of much importance, as the quickly recuperating organism replaces the losses caused during the sickness by taking increased quantities of food—in chronic affections it is important that sufficient quantities of food be taken.

The majority of stomach patients consulting the physician, after the disease has been progressing quite a while, have lost more or less weight. The principal reason for this lies in the fact that the body has received too small a quantity of nourishment in order to replace the waste. The ordinarily insufficient appetite, the early appearance of a feeling of satiation, the pain often appearing after meals, and less frequently vomiting, are the principal factors of subnutrition.

At this point it becomes necessary to divide the patients with stomach troubles into two large classes: First, those with organic lesions of the stomach; second, those with functional disturbances.

Organic Gastric Disease

The first class comprises, (a) the malignant diseases of the stomach itself or its orifices (carcinoma ventriculi, cardiæ, pylori); (b) cicatricial strictures of the cardia or pylorus; (c) absence of secretory work of the stomach: achylia gastrica.

In this whole first class, with the exception of group (c) which lies, so to speak, between the first and second class, we are unable to accomplish much by either treatment or dietetics. In existing strictures of the cardia or pylorus one will be obliged to seek surgical aid. Even in cancer of the stomach-wall the resection of the affected part is advisable whenever the operation is possible. I cannot abstain from calling attention at this point to the splendid results of the recent stomach surgery, frequently practised of late in our own country (F. Lange, N. Senn, R. Abbe, Willy Meyer, McBurney, Weir, and others). In carcinomatous strictures a new passage can be established, either for bringing food into the stomach, by a gastric fistula, or for allowing it to pass into the intestines, by gastroenterostomy. In this way one succeeds at least in temporarily giving these unfortunate patients relief and in ameliorating their nutritive condition. In the cicatricial strictures one is entitled to promise to the patients, nowadays, perfect recovery by undergoing operative treatment.

(*To be continued*)

Symposium on Endocrinology

THE TREATMENT OF THYROTOXICOSIS AS DICTATED BY ITS PATHOGENETIC ALLERGIC MECHANISM

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A thyroid crisis in the immediate postoperative period after a thyroid operation in a thyrotoxic subject is, for all practical purposes, a laboratory experiment: the thyrotoxic person represents an underlying predisposing condition; the operation represents a provocative cause; and the subsequent crisis represents a "successful take". The correct interpretation of these phenomena represents the correct conception of thyrotoxic disease.

Crises occurring in toxic thyroid disease may develop in any case, including the most unexpected, and in both unoperated and operated cases. In Boyce's (4) series, thirty-three of forty-nine nonsurgical deaths were due to crisis, as compared with twenty-three of the forty surgical deaths. Most of the nonsurgical deaths from crisis occur in patients for whom surgery does not seem to have been contemplated.

Thyrotoxic patients literally stand in jeopardy every hour. In unoperated cases the patients are subject to many different stimuli sufficient to throw them into a crisis. They react badly to their environment, to various psychic traumata and to consequent emotional disturbances. The most trivial intercurrent illness or accident is enough to destroy their emotional balance and to throw them into a crisis which may readily prove fatal. Similar crisis may also result in patients not operated upon, from roentgen therapy (Bansi, 1), massive thyroid medication, and sudden interruption of a preoperative iodine therapy, infections, diagnostic procedures such as the determination of the basal metabolism, bodily exertion, and severe emotional strains. A severe thyrotoxicosis may also lead spontaneously to a crisis.

The danger is at its maximum after thyroid operations independent of the type of operation performed —unilateral or bilateral resections of the gland, polar ligations, etc., either in single or multiple stages—all of which carry the danger of a subsequent crisis in almost equal degree. For all surgeons, the relative number of such postoperative crises is to a certain extent a matter of skillful operative technique, of good fortune, and of good and prolonged preparation of the patient before operation. The latter, especially, is a most important factor.

The danger also exists after operations performed upon thyrotoxic subjects, for other conditions and on distant organs in other parts of the body. Even trivial operations are sometimes sufficient for an excitatory cause.

The symptoms of the fatal postoperative crisis are characteristic and too well known to require description. Those of the other, the nonoperative form, vary similarly as the different clinical forms of thyrotoxicosis. Aggravation of existing symptoms is characteristic and those referable to some organic system, such as the gastrointestinal and cerebral system, predominate.

In severe cases, the patient exhibits increasing muscular atrophy, frequent vomiting, diarrhea which defies treatment, motor unrest, anxiety, sleeplessness, psychotic delusions, and finally coma. There is dryness of the hair and skin. There is a tendency toward descending infection in the respiratory tract, and an increasing malfunction of the cardiovascular system. An increasing amount of urobilinogen is found in the urine with a tendency toward oliguria, and a great increase in creatine in proportion to the total creatinine.

The course of the illness during a crisis may be fatal after one or a few days, or the symptoms may recede after the exciting factor, such as infection, subsides or effective therapy is instituted.

No diagnostic means exists for detecting the impending crisis except in the clinical manifestations of the disease. Not always are these recognizable even to an observant physician. For this reason, every case deserves the utmost care and watchfulness.

Whatever the pathogenetic origin and mechanism of this endocrine disturbance is, the culminating factor is always in the thyroid. A pace making factor is present in the pituitary gland.

There is a neurogenic conception of the etiology of the disease (Sunder-Plassman, 9). A neurological connection to the thyroid has been established by the discovery in the thyroid of a neurohormonal cellular system connected through the parasympathetic system with the vascular endothelium and the thyrocytes of the follicles. These neurohormonal cells are distributed throughout the parasympathetic system and the endocrine glands; they form an independent parenchyma within the thyroid; and they determine the normal and abnormal output of the thyroid. The significant factor in exophthalmic goiter is the unrestrained absorption of both the stored and newly secreted colloid material. This is further confirmed by demonstrable morphological changes in the central nervous system, especially in the hypothalamic centers and around the vagal nucleus.

There are remarkable resemblances in the phenomena of thyrotoxicosis and of fear. There are many resemblances between the latter and an epileptic attack and its convulsive seizures. The close relationship of thyrotoxicosis and epilepsy was remarked by Patman (7). Other observers have noted that each of these conditions had similar specific systems. These associations have important relationships to the residual symptomatology of patients operated upon and to the persistence of any psychoneurotic manifestations.

Clinical Manifestations

In thyrotoxicosis the following clinical manifestations are remarkable:

1. The frequent familial constitutional tendency.

2. The onset of the illness is most frequently referred to some well defined episode which disturbs the subject profoundly.

The fact that the disease might originate acutely and progress with great rapidity only emphasizes this point all the more. The characteristics of the nonoperative crises are similar to the original manifestations at the time of onset of the total illness. In the postoperative cases, the evidence is overwhelming and is universally accepted, that the crisis is precipitated by the operation on the thyroid. The fact that crises may be originated after other types of operation, or after the many trivial and important causes previously referred to in this communication, indicates that in every case there has occurred a definite event which has preceded the crisis.

3. In recurrent or persistent thyrotoxicosis, both in medically and surgically treated patients, the same factors and causes, including physical and psychic trauma, pregnancy, infections, etc., are always responsible for the exacerbation, recurrence, or persistence of the toxic state. The acuteness and severity of these manifestations vary as in the original stage of the disease and are of similar pattern. It is important to remember that this type occurs without, as well as after, operation.

4. In noncrises conditions, no method of medical treatment actually "cures" the patient. No evidence exists that either iodine or x ray treatment is curative, as the physician would know if he followed his supposedly cured patients until the end of their lives. Iodine brings about remissions or toxicity. It prevents aggravated manifestations of toxicity over long periods of time. It mitigates the severity of exacerbations which occur in the natural course of the disease. Anatomically, it produces involutionary changes in the gland. But by the same token, no gland is ever brought back by iodine to an entirely normal state, and clinically no toxic patient can ever be permanently cured by it. The stimulus to disease remains; sooner or later the gland returns to activity, and the toxicity flares up anew, as soon as iodine is withheld.

After operation, it appears as if the course and development of the disease has been cut off and stopped at the stage and time of the performance of the operation. The basal metabolism decreases more rapidly when subtotal thyroidectomy is performed than after medical treatment, because the thyroid gland is responsible for forty percent of the bodily heat (Dubois, 5). The patient gains weight, the pulse rate drops, and the tremor subsides to a degree. But, nevertheless, in spite of the fact that the patient states that he is "well", physical examination of the patient discloses that all of the previously existing objective symptoms and elicitable signs and manifestations are still present, including among others, the cardinal symptoms of thyrotoxicosis or exophthalmic goiter—nervousness or elicitable nervous symptoms and manifestations, rapid pulse exophthalmos, etc.

5. The secondary manifestations and/or complications of thyrotoxic disease including congestive heart failure, nitrogen retention, vomiting, diarrhea, rapid weight loss, emotional instability, an abnormally low index of respiratory stability (Bartlett, 2), an abnormally low liver function (Quick, 8), and an unsatisfactory exercise test (Bartlett, 2), are only temporarily, incompletely and sometimes not at all relieved, and are constantly subject to recurrences and exacerbations, so that the patient must be under constant medical surveillance.

Associated lesions.—The bulk of the accumulated evidence indicates that the pathogenetic rôle of the thymus in thyrotoxicosis is not fully established in spite of their association.

The liver changes are remarkably constant. The action apparently starts at the periphery of the lobule and produces a parenchymatous degeneration of the cells similar to that produced by other toxic agents. There is a marked reduction in fat and an almost complete absence of glycogen, factors which probably preceded the degenerative changes. The latter are of various grades and frequently terminate in necrosis of the liver cells. The fibrosis probably indicates a preceding condition of hepatitis, hyperemia, edema, and degeneration without lymphocytic or leucocytic reaction.

Comparison with certain factual knowledge of allergic conditions.—Recent research has increased the number of certain relatively obscure diseases which include in their pathogenetic mechanism, an increased reactivity of tissue to various known and obscure antigenic substances. According to Weil (10), the site of the reactions is in the parenchymal cells of the liver, and the latter dominates the entire picture. In the very severe cases, the organ is tremendously enlarged; it is intensely cyanotic and bleeds freely on section; the parenchymal cells show varying degrees of congestion and hemorrhage, clouding swelling, and, in severe cases, a disseminated necrosis. In long-standing cases, the liver changes are even more marked and assume a chronic character even to certain fibrotic changes.

Neurological allergy.—According to Blanton (3) and Kennedy (6), the brain, meninges, and the nerve trunks are all subject to the allergic reaction, characterized by vascular spasm and dilatation, sudden localized edema, and cellular infiltration (focal angioneurotic edema), and reflecting the location and degree of focal injury. According to Kennedy (6), such focal areas, 1, involving the brain substance cause epilepsy; 2, involving the meninges with painful stretching cause migraine; 3, involving nerve roots and trunks cause evanescent peripheral motor paralysis, and 4, that many cases of "transient palsies", retrobulbar neuritis, and maladies of peripheral nerves and spinal roots are all due to protein sensitization.

Discussion

There is no doubt that the study and understanding of thyrotoxic crises furnish the best approach and clue to the understanding of thyrotoxicosis in general. It is undoubtedly true that these patients have been suffering from latent if not active toxicity for long periods of time, and that all the manifestations, including all exacerbations and recurrences, are episodes of a single disease.

Acute onsets and all sudden exacerbations, including all crises, are due to the sudden release of some factor which acts in a powerful manner, apparently through the thyroid, as an antigenic and/or catalytic agent in an already sensitized individual. Through a

neurohormonal system and neurological pathways (Sunder-Plassman, 9) the excitatory cause is quickly distributed and brings about the acute and hyperacute onsets, and the equally acute exacerbations and crises.

After the disease has been present for some time, the demonstrable pathological-anatomical changes in thyrotoxicosis (Basedow's disease, exophthalmic goiter) are similar to those seen in equally long-standing cases of allergic disease. In this regard the liver changes are especially important, and the knowledge of this anatomical and clinical association is well spread by this time. Because of inherent physiological functions of the liver, this has special reference to sensitization and antibody formation.

In the medical treatment of thyrotoxicosis and in the preparation of thyrotoxic patients for operation, iodine (Lugol's solution) seems to exert its beneficial effect by decreasing the sensitization of the patient. The occasional uncontrolled effect which it sometimes causes is in line with the occasional similar action of other antigenic bodies.

This factual, clinical, and pathological evidence seems overwhelmingly in favor of the viewpoint that thyrotoxicosis must be classified—at least as far as its pathogenetic mechanism is concerned—with the allergic group of diseases.

Conclusions

In view of the factual knowledge stated above and the consequent mandatory interpretation of this disease, as outlined above, it must be accepted that operation in otherwise well selected cases, is but an incident in the total treatment of the thyrotoxic patient. Owing to the underlying psychosomatic background of this disease, it must be assumed that all of the predisposing and sensitizing factors are still present and in a dormant state even after a well performed and apparently successful operation. Under the continuation of the previously existing and exciting factors which originally brought the disease to its exaggerated and clinically high grade of toxicity, the toxic state may again come to the fore even to a state of toxicity surpassing the preoperative condition. Or new environmental, emotional, traumatic or other new exciting stimuli may appear which would easily be sufficient to produce the same result with similar dangerous and devastating effects.

With such knowledge, it must be accepted that the treatment of the thyrotoxic patient is not completed by the performance of a successful subtotal thyroidectomy and the discharge of the patient from the hospital, even though subtotal thyroidectomy is a most important item in the therapeutic effort. Thereafter the patient must be kept under constant supervision with the prophylactic object of preventing and eliminating all of those exciting causes which according to his psychosomatic status could easily bring about recrudescences of thyrotoxicosis in these already badly sensitized patients.

References

1. BANSI, H. W.: Thyrotoxic crisis and thyrotoxic coma (Die thyrectoxische Krise, das thyroetoxische Koma), *Ergebn. d. inn. Med. u. Kinderh.*, 56:305, 1939.
2. BARTLETT, W.: *The Surgical Treatment of Goiter,* St. Louis, 1926. The C. V. Mosby Company.
3. BLANTON, WYNDHAM B.: *Handbook of Allergy for Students and Practitioners,* Baltimore, 1942, Charles C. Thomas.
4. BOYCE, F. F.: Toxic thyroid disease as a surgeon would have the general practitioner conceive it, with a special note on the liver factor, *Mississippi Valley Med. Jour.* 62:2-13, 1940.
5. DUBOIS: *Basal Metabolism in Health and Disease,* Philadelphia, 1927.
6. KENNEDY: Quoted from Blanton. (See ref. 3.)
7. PATMAN, J. J.: Quoted by Sajous, in Tice's *Practice of Medicine.*
8. QUICK, A. J.: Clinical value of the test for hippuric acid in cases of diseases of the liver, *Arch. Int. Med.* 57:544, 1936.
9. SUNDER-PLASSMANN, P.: Exophthalmic goiter and its treatment, *Deutsche med. Wchnschr.* 67:141, 1941.
10. WEIL, R.: *Jour. Immunol.* 2:469-525, 1917.
11. WILENSKY, A. O.: The modern treatment of thyrotoxicosis, MEDICAL RECORD, 155:495-497, 1942.
12. WILENSKY, A. O.: Relationship of thyrotoxicosis to the present war effort: its modern treatment, *Am. Jour. Surg.,* 60:221-226, 1943.
13. WILENSKY, A. O.: The proper selection of thyrotoxic patients for subtotal thyroidectomy, MEDICAL RECORD, 156:350-352, 1943.
14. WILENSKY, A. O.: The allergic pathogenic mechanism of thyrotoxicosis, *Surg.,* 17:61-72, 1945.

12 EAST EIGHTY-SEVENTH STREET

THIOURACIL IN THE CONSERVATIVE TREATMENT OF EXOPHTHALMIC GOITER

Observations in Fifty Cases

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Though a newborn babe in chemotherapy, thiouracil is becoming a lusty youngster that bids fair to assume an important role in expediting recovery from Graves' disease. The literature on thiouracil is becoming voluminous, yet we are still a considerable distance from precision in the use of this drug.

There are several important points which must be taken into account by those assuming the responsibility of treatment of a sufferer from thyrotoxicosis. The first is the differentiation between toxic adenoma and exophthalmic goiter. Though presenting several features in common, these conditions are not "different manifestations of the same disease."

Toxic Adenoma and Exophthalmic Goiter

Toxic adenoma (hyperthyroidism with nodular goiter) is the superimposition of toxicity upon an old-standing simple thyroid neoplasm of about fifteen years' duration. After preparatory medication with iodine, thiouracil or whatever other measures are found useful in a given case, employed singly or in combination, the now symptomless thyroid neoplasm requires

surgery. This eliminates the cause of the symptoms and the patient recovers unequivocally.

Exophthalmic goiter (Graves' disease, Basedow's disease, hyperthyroidism with diffuse goiter) is a constitutional neuroendocrine dysfunction in which the thyroid, if swollen, is a recent constituent of the syndrome. An attack on the thyroid, whether by surgery or radiation, does not remove the cause and is palliative, not curative. Conservative attention with a properly defined regime directed toward the individual rather than the thyroid, usually succeeds in correcting the dysfunction and in due time the patient becomes and remains symptom-free. The measures adopted are a modified rest program (usually without curtailment of customary activities), diet, psychotherapy and drugs, among which thiouracil is proving increasingly useful.

Perusal of the literature and our observations lead us to conclude that the following potential contraindications to the use of thiouracil should be borne in mind: 1, a history of sensitivity to sulfa drugs; 2, a history of multiple allergy to other drugs or to foods; 3, the presence of an unusually large goiter with or without pressure symptoms; 4, extreme (progressive or malignant) exophthalmos, unless thiouracil can be combined with thyroid extract; 5, normal or subnormal thyroid function; 6, pregnancy, and 7, the presence of infections.

In the above mentioned clinical circumstances thiouracil, if given at all, should be administered in small doses under careful vigilance. Rather than begin with maximal doses and run the risk of toxic complications, thiouracil medication should begin with small doses under careful control conditions and, if deemed safe and desirable, it should be cautiously increased.

Complications of Thiouracil Medication

Evidences of toxicity from the use of this drug may occur within a few days to several weeks. Leucopenia, granulocytopenia and occasional agranulocytosis are especially disturbing, particularly in the presence of an infection. Evidences of liver damage are occasionally observed. More common complications are chills and fever, nausea, vomiting, diarrhea, urticaria, maculopapular rash and other skin eruptions, arthralgia, edema of the legs, and enlargement of the submaxillary salivary glands. These complications may disappear within several days to two or three weeks after the discontinuance of the drug, when in many cases it may be resumed cautiously in minimal doses.

Since thiouracil produces thyroid hyperplasia, another possible complication is an increase in size of the thyroid to the point of further cosmetic embarrassment and even pressure symptoms. This may be transient, with eventual shrinking of the mass. At times the mass persists, requiring cessation of thiouracil medication. Whether the increased swelling may become permanent cannot be determined in these early stages of research with this drug. Cautious supplementary thyroid medication may prevent this condition.

Another event during thiouracil medication, in consequence of the "chemical thyroidectomy," is myxedema. Marked reduction or temporary withdrawal of medication for a week or ten days restores the patient to normal, when the minimal maintenance dose may be given for the proper length of time.

Increase of exophthalmos may be expected in an unknown percentage of cases under thiouracil medication, by reason of increased anterior pituitary output of thyrotrophic hormone resulting from the arrest of thyroid hormone synthesis. This is usually temporary. This phenomenon should lend caution to the use of thiouracil since such patients have not been under observation long enough to permit of categorical elimination of the possibility of posttherapeutic progressive or malignant exophthalmos.

Results in Fifty Patients

We are using thiouracil in a series of forty cases of exophthalmic goiter and find it of distant value in the control of the element of thyroid hyperexcitability. This is apparently accomplished by a gradual curbing of the synthesis of thyroid hormone. We are giving the drug not as a mainstay to the exclusion of other measures, but as a *supplement* of considerable promise.

Along with small doses of iodine, or quinine, or prostigmin, or a barbiturate, or a combination of these, (depending upon individual requirements), we are administering thiouracil in tablets of 0.1 gram three times a day at first, and as the patient becomes symptom-free and the basal metabolism and blood cholesterol reach normal, the daily dosage is reduced to two tablets. When mild hypothyroidism is approached, our dose is one tablet daily as the maintenance dose. Within a few months, the drug, along with other remedies, can be withdrawn.

We find that the inclusion of thiouracil in the general conservative management of exophthalmic goiter saves much time in the rehabilitation of these patients to normal existence. Small doses of the drug were not accompanied by the many complications reported from its use in double or triple the doses we employ. Only one of our patients developed a mild maculopapular rash with urticaria on an initial dose of 0.2 grams daily, taken for two weeks, and this disappeared within forty-eight hours after withdrawal of the drug. It would seem that the cause of most of the complications reported from its use is toxicity resulting from overdosage.

Conclusions

1. Thiouracil promises to be a valuable asset in the armamentarium of the internist who assumes the responsibility of the conservative management of sufferers from exophthalmic goiter.

2. Thiouracil administration may be undertaken only with due respect for possible contraindications and complications, hence the patient should be kept under proper control with the basal metabolic rate, cholesterol and leucocyte studies as guides.

3. To favor safety, thiouracil administration should begin with small doses.

4. In the interests of enduring recovery, we find that thiouracil alone is not as effective as thiouracil given with other well-tried measures.

5. We have yet much to learn from the potential usefulness of thiouracil in the treatment of exophthalmic goiter.

P.S.—Since this article was proof read, one patient in this series taking thiouracil was lost. She was a married woman of thirty-two, who had received only 0.1 gm. of the drug twice daily for a period of only eight weeks. She developed symptoms of agranulocytosis, and despite heroic therapeutic efforts, died in less than a week. This unfortunate circumstance should lend further caution to the administration of this drug, despite accumulating enthusiastic reports.

THYROCARDIACS*

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It is not often that we can state definitely that a form of heart disease is curable. Thyroid heart disease can be cured. Therefore, this subject is probably the most important aspect of all heart disease, for it comprises the one large group of cases in which the difference between accurate and inaccurate diagnosis and treatment is the difference between chronic invalidism and the restoration of health and a full life.

Etiology

The fundamental cause of thyroid heart disease is an abnormal activity of the thyroid gland, with excessive or disturbed secretion. Actual heart failure due to hyperthyroidism is relatively rare. Rarely a goitre by its size alone causes cardiac embarrassment by arterial, venous or bronchial obstruction in the superior mediastinum. It occurs both in adenomatous goitre, which has become hyperfunctioning because one or more adenomata secrete normal thyroxin without check (toxic adenoma), and in exophthalmic goitre in which the thyroid gland is secondarily stimulated to produce more and probably an imperfect thyroxin (hyperplasia).

Females are affected four or five to one over males. However, males are more seriously affected and show a higher incidence of cardiac involvement—two to one. Adenomatous goitre is most prevalent at ages thirty-five to forty-five, but may occur in childhood. Thyrotoxicosis may occur in children as young as three.

Physiology and Pathology

Hyperthyroidism produces the "overdemonstrative heart", with tachycardia, throbbing vessels, large area of precordial pulsation, loud heart sounds and apparent cardiac enlargement. These are *not* symptoms of heart disease, but manifestations of an increased amount of thyroxin in the myocardium, stimulating its metabolism and causing it to beat more forcibly and more rapidly. The heart as well as the circulation is physiologically overactive. Arrhythmias may occur which are purely the result of a toxic thyroid gland, but will disappear if the hyperthyroidism is cured. The minute volume output of the heart is increased, and so the heart actually does more work. An increased circulation rate, fifty percent above normal at rest, is brought about mainly by the tachycardia, which alone can increase the minute volume, and also by the augmented force of the heart beat. The systolic blood pressure is usually elevated, because each beat of the heart is stronger. The diastolic pressure is lowered because the peripheral arterioles and capillaries are dilated, due to the excessive amount of metabolites in and around them. Dyspnea on exertion is due to the diminished vital capacity of the lungs and reduced cardiac reserve.

Congestive failure is unusual and occurs only in older persons whose hearts have lost their youth, or which are in addition to hyperthyroidism, burdened by hypertension, or impaired by diseased coronary arteries, or a coincidental endocarditis. Once congestive failure sets in, it is similar to congestive failure due to any type of heart disease, except, that the rate is more rapid and auricular fibrillation is almost always present. Except for some slight color changes, and the presence of dilatation, there is usually no abnormality on either microscopic or macroscopic examination of the heart. The heart may weigh four hundred to five hundred grams. Hyperthyroidism alone does not cause structural changes in the heart. Cardiac enlargement is not the rule.

Symptoms

Symptoms of the underlying hyperthyroidism are usually found, although often overlooked, because of the prominence of the heart disturbance. The gland may be nodular (adenomatous) or diffusely enlarged (hyperplastic). The latter often shows a systolic bruit and thrill over the superior thyroid arteries. Severe dyspnea alone may produce exophthalmos or staring. The patients complain of undue weight loss despite the presence of a good appetite. They are very nervous and there is tremor of the fingers. They perspire excessively and complain of feeling warm; they prefer cold to hot weather. Palpitation is a most annoying symptom and there are two types: 1, forceful beating with a normal rhythm, and 2, paroxysmal that is due to changes in rhythm. Transient diarrhea is a common complaint and occurs frequently. Angina rarely accompanies thyrotoxicosis, and then only in older persons with coronary disease which is not sufficient in itself to give rise to the paroxysmal pain.

On examination the patients appear emaciated, weak and nervous, with a moist hyperemic skin. They have a certain quickness of motion and alertness, which differentiates them from the usual patient in congestive failure. The hair is prematurely gray. The pulse is rapid even in sleep, which differentiates it from neurocirculatory asthenia. If the pulse is regular, the rate is between 100 and 150 per minute. If irregular, with auricular fibrillation, the rate is often over 150. However, it may be under 80 or even 70 in males with a toxic gland.

The heart is enlarged and has a diffuse impulse and a systolic thrill. The heart sounds are loud and hyperactive, with an accenturated first sound. A systolic murmur is often heard at the apex, base, or both. The systolic blood pressure ranges around 140 to 150 millimeters of mercury. The diastolic blood pressure ranges between 60 and 70 millimeters of mercury, so there is an increased pulse pressure. Signs of congestion of the organs and edema of the tissues are present and there may by orthopnea.

Paroxysmal auricular fibrillation and paroxysmal auricular tachycardia are common. Auricular flutter and A-V block may occur, but are uncommon. Auricular fibrillation is present in over fifty percent of the cases of congestive failure. It is difficult to slow the rate with digitalis when auricular fibrillation is present, and this is an important clue.

Fluoroscopy shows only moderate enlargement of

*Read before the East Side Clinical Society, October 10, 1944.

the heart, prominence of the pulmonary conus, forceful heart action with wide excursions between systole and diastole, and tachycardia.

Electrocardiogram usually reveals nothing abnormal except tachycardia or arrhythmia. Auricular fibrillation is rarely absent after failure sets in.

Basal metabolic rate is usually high, over thirty percent above normal and often more, but in chronic cases it may not be greatly elevated. Rarely the basal metabolic rate is within normal range—0 to plus 10. Such patients show an abnormally low rate to 0 to –30 without myxedema. The rate is often increased by dyspnea from any cause. An elevation of plus 35 or more in the absence of fever or leukemia is suggestive of hyperthyroidism. Reduction of the basal metabolic rate following the administration of iodine is a valuable aid in diagnosis.

Laboratory findings show that transient glycosuria is common; and the blood cholesterol diminished. There is a decrease in creatine tolerance with resultant creatinuria, and the excretion of creatinine is reduced. An increase in the rate of circulation and an increase in the blood volume are also found.

The course and prognosis depend on age, sex, social position, duration of symptoms, and the presence or absence of heart disease. The latter may predispose to the early appearance of heart failure. After failure sets in, it is usually progressive over a number of months; rarely years. If the heart is not too greatly damaged and compensation can be restored or nearly so by medical treatment, operative removal of a large part of the thyroid gland offers an excellent opportunity for cure. However, thyrotoxicosis recurs in ten percent of cases.

Treatment

The treatment is fourfold: therapy of the thyrotoxicosis, therapy of the heart failure, therapy of the auricular fibrillation and observation for the recurrence of abnormal thyroid activity.

Thyrotoxicosis.—This condition is treated by rest in bed, sedatives, and large doses of thiamine chloride which enhances the action of the sedative. Thiamine chloride is diminished in this condition. The diet should be mainly carbohydrates and have a high caloric value, because of the increased basal metabolic rate. Proteins should not be limited when serum proteins are low and there is a tendency to edema. The requisite amount of iodine need be only fifteen milligrams daily. Iodine promotes the storage of thyroglobulin in the follicles and prevents the escape of the hormone from the gland. A period of ten to fourteen days is required to prepare the patient for subtotal thyroidectomy. Occasionally, because of the complications of severe heart disease, a longer period is necessary.

The preoperative treatment should be continued as long as there is evidence of improvement, as shown by a fall in the basal metabolic rate, slowing of the heart rate, and a diminution in congestion. The common drugs used are Lugol's solution, five to ten drops three times a day, and saturated solution of potassium iodide, five to ten drops three times a day, and syrup of hydriotic acid, 3 I. O.D. (50 milligrams).

Heart failure.—Treatment of heart failure is by the usual regimen of digitalis, diuretics, salt poor diet, and the restriction of fluids. The tolerance for digitalis is marked and the dosage may need to be increased fifty to one hundred percent above normal in order to get appreciable results.

Auricular fibrillation.—This will not be controlled while the thyrotoxicosis persists, but there is an even chance that relief of the thyrotoxicosis alone will also relieve auricular fibrillation. If not, quinidine will in half the postoperative cases in which fibrillation persists, while digitalis can be used permanently to control the ventricular rate in the rest of the cases with persistent auricular fibrillation. For paroxysms of auricular fibrillation before operation, five grains of quinidine every hour, or ten grains every two hours may be used until the fibrillation is abolished, or minor toxic symptoms appear. If paroxysms of auricular fibrillation appear postoperatively and last more than a fortnight, give quinidine, three to six grains three or four times a day, in the hope that normal rhythm will be restored. Quinidine is usually more successful postoperatively than preoperatively.

Postoperative care.—Continue the iodine for two weeks or longer and whatever other measures the cardiac problems require. If the rhythm was regular preoperatively, an attack of transient auricular fibrillation is not uncommon a few days postoperatively. If persistent auricular fibrillation was present preoperatively, the heart often will resume normal rhythm spontaneously during the first week or two postoperatively. Basal metabolism tests taken from time to time should be normal several weeks later. If the basal metabolic rate remains elevated, the operation is not successful and some features, such as auricular fibrillation, may persist. If the basal metabolic rate returns to normal and auricular fibrillation persists, look for other causes of auricular fibrillation. Permanent relief is obtained and the patients are often able to carry on full duty without further medication. They are left with whatever independent form of heart disease which happened to be present, but now the previously embarrassed heart resumes its compensated state and is likely to continue so for years.

Radioactive iodine was used experimentally by both the Boston group and in the Radiation Laboratory in California. They found that radioactive isotopes of iodine entered the thyroid gland and carried a certain amount of radioactivity to it.

Thiouracil is related to the sulfonamides. It produces thyroid hyperplasia and insufficiency in animals. Astwood showed that thiouracil inhibited the formation of thyroid hormone in the gland by some type of enzymatic block. As a result, once the store of thyroid hormone was used up, a state of thyroid insufficiency developed; the anterior pituitary was stimulated to produce more thyrotropic hormone, which then caused ineffectual thyroid hyperplasia. Thiouracil reduced the basal metabolic rate with a corresponding improvement in symptomatology. There is a latent period of seven to fourteen days. Objective and subjective improvement precedes the drop in the basal metabolic rate. The thyroid gland remains the same in size and consistency.

The dose is six to eight tenths of a gram per day in divided doses. The maintenance doses is one to two tenths of a gram daily—after the basal metabolic rate is normal. However, toxic reactions occur, the most serious being agranulocytosis which is due to either

idiosyncrasy or excessive dosage of thiouracil. Jaundice, skin eruptions, hyperthermia, edema and arthralgia also occur, but will disappear if thiouracil is withheld. The use of liver and vitamins do not prevent these reactions.

Irradiation may be used if the decompensation cannot be greatly influenced by medical treatment. X ray therapy of the thyroid gland may then bring about improvement, making it possible for an operation to be performed in the future. In medical treatment, rest and iodine should be employed as for operation. X rays should be used in the treatment of hyperthyroidism in children, especially between the ages of twelve and fifteen, because of the endocrine factor, in an effort to avoid removal of the gland. If there is no improvement in three months, the x ray treatment should be discontinued, and if an exacerbation occurs, operation is necessary.

Summary

Thyroid heart disease is curable. The symptoms are those of congestive heart failure; a rapid pulse rate and auricular fibrillation are often present. Operative removal of the thyroid gland, if preceded by proper medical treatment, is curative. Radioactive iodine and thiouracil show promise of producing good therapeutic results.

References

1. LEVINE, S. A.: *Clinical Heart Disease.* First edition. W. B. Saunders Co., Philadelphia, 1940.
2. YATER, W. M.: *Fundamentals of Internal Medicine.* First edition, revised. D. Appleton-Century Co., New York, 1942.
3. ANDRUS, E. C. and MCEACHERN, D.: Cardiac manifestations of hyperthyroidism. *Am. Jour. Med. Sc.,* 183:741, 1932.
4. BLUMGART, H. L. and GARGILL, S. L., and GILLIGAN, D. R.: Studies on the velocity of blood flow. XIII: The circulatory response to thyrotoxicosis. *Jour. Clin. Investigation.* 9:69, 1930.
5. ERNSTENE, A. C.: The cardiovascular complications of hyperthyroidism. *Am. Jour. Med. Sc.* 191:248, 1938.
6. LAHEY, F. H.: End results in thyrocardiacs. *Ann. Surg.* 90:750, 1929.
7. WILLIUS, F. A., BOOTHBY, W. M., and WILSON, L. B.: The behavior of the heart in exophthalmic goiter and adenomatous goiter with hyperthyroidism. *Tr. Assn. Am. Phys.,* 1923.
8. LAHEY, F. H., HURXTHAL, L. M., and DRISCOLL, R. E.: Thyrocardiac disease: review of 614 cases. *Ann. Surg.* 118:681, 1943.
9. LERMAN, J., and MEANS, J. H.: Cardiovascular symptomatology in exophthalmic goiter. *Am. Heart Jour.* 8:55, 1933.
10. STEWART, H. J., and EVANS, W. F.: The peripheral blood flow in hyperthyroidism. *Am. Heart Jour.* 20:715, 1940.

22 EAST THIRTY-SIXTH STREET

REPORT OF CLINICAL AND TOXICITY INVESTIGATIONS WITH THYROBROM FOR WEIGHT REDUCTION*

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For weight reduction in a large group of active persons retaining their daily occupations, the dietary is usually restricted to a level where they can comfortably be active. In such a group it was found that, after a certain weight loss was reached, no further reduction could be obtained by more rigid dietary control without subjecting the patient to difficulty in carrying on his work. Thyroid was administered to aid further reduction of the obesity.

A percentage of these subjects was discovered to react unfavorably to thyroid U.S.P. in adequate dosage. This was exhibited by nervousness, palpitation, trembling, increase in pulse rate and increased heart rate on electrocardiographic study.

Since it has been shown that metabolic activity can be increased without undue thyrotoxic effect, a therapeutic agent was sought that would produce this desired reaction. Thyroid extract treated with bromine was thought to be suitable for this purpose, the bromine to provide sedative action.

On chemical analysis, the iodine content of thyrobrom (as the brominated thyroid mixture was called) was identical with that of thyroid U.S.P. Its distinguishing chemical characteristic was the presence of bromine in the amount of 0.20 percent calculated as total bromine content and 0.05 percent as complex protein salt.

To evaluate the safety of thyrobrom for clinical use, toxicity tests were performed on three species of animals; i.e., guinea pigs, rabbits and rats.

Guinea pigs fed one-fourth of a grain of thyroid U.S.P. per kg. daily for ten weeks showed a survival rate of thirty-seven and one-half percent. Survival rate on the same dosage of thyrobrom for the same period of time was fifty percent.

Four rabbits receiving an initial dose of three grains per kg. of thyroid U.S.P. and, after two days without medication, one grain per kg. daily, survived for an average of twenty days. A similar group of rabbits receiving thyrobrom in the same manner survived for an average of twenty-four days.

Tests on rats were performed on normal and thyroidectomized animals. The latter were used because this condition simulates that of a subthyroid state in the human for whom this preparation is intended. All rats survived ten to sixteen grains per kg. daily of thyroid U.S.P. and thyrobrom for a period of four months, the equivalent of ten manrat years.

Since toxicity tests on animals demonstrated the comparative safety of thyrobrom in relation to thyroid, controlled clinical study was made on a group of sixty obese patients. All patients had been regulated on restricted caloric intake which varied in the individual cases depending upon their activity. The intake varied from 1200 to 2200 calories daily. Throughout the entire period of observation, the caloric intake in each case was kept as constant as can be expected from ambulant patients adhering to rigidity of dietary.

Half of the group received thyroid U.S.P. first and the other half thyrobrom first. After suitable rest periods, medications were switched; i.e., those patients

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Table 1: Physical and Chemical Properties of Thyrobrom and Thyroid U.S.P.

Property	Thyrobrom	Thyroid U.S.P.
Description	Amorphous powder slightly browner in color than thyroid U.S.P., having a sweet ester odor like that of chlorophyl.	Yellowish, amorphous powder, having characteristic meat-like odor.
Iodine	0.20-0.24 percent	0.20-0.24 percent
Nitrogen	7.26 mg./percent	8.8 mg./percent
Bromine As total bromine content	0.20 percent	.00000-trace
As complex protein salt	0.05 percent	Negative
Combined by addition in thyroxine ring	0.04 percent	Negative

Table 2: Average Analysis of Group I

Received Thyrobrom during the First Period of Medication and Thyroid U.S.P. during the Second Period (Same Caloric Intake while under Thyrobrom and Thyroid U.S.P.)

	Thyrobrom	Thyroid U.S.P.
Number of patients	30	30
Average age	32.97	32.97
Female	25	25
Male	5	5
Average height	62.97 inches	62.97 inches
Daily dosage	6.47 grains	7.95 grains
Weight: Before	203.17 pounds	205.6 pounds
After	185.3 pounds	192.03 pounds
Loss	17.87 pounds	13.57 pounds
Basal metabolic rate:		
Before	+ 0.6	+ 2.17
After	+29.97	+27.17
Increase	29.37	25.0
Pulse: Before	78.56	80.23
After	91.36	97.23
Increase	12.8	17.0
Palpitation:		
Before	2	4
After	5	13
Increase	3	9
Nervousness:		
Before	1	4
After	4	9
Increase	3	5

who had been taking thyroid were put on thyrobrom and vice versa. The average daily dose of thyrobrom was 7.461 grains and that of thyroid U.S.P., 7.45 grains, administered for an average of three months.

Observations in these cases were directed primarily to weight loss and thyrotoxic symptoms resulting from medication; specifically, increased pulse rate, increased basal metabolic rate, palpitation and nervousness. Observations were also made in the thyrobrom treated

Table 3: Average Analysis of Group II

Received Thyrobrom during the First Period of Treatment and Thyrobrom during the Second Period (Same Caloric Intake while under Thyroid U.S.P. and Thyrobrom)

	Thyroid U.S.P.	Thyrobrom
Number of patients	30	30
Average age	32.33	32.33
Female	30	30
Male	0	0
Average height	62.8 inches	62.8 inches
Daily dosage	6.95 grains	8.46 grains
Weight: Before	207.17 pounds	203.03 pounds
After	199.27 pounds	190.47 pounds
Loss	8.9 pounds	12.56 pounds
Basal metabolic rate:		
Before	+10.3	+ 8.93
After	+33.4	+35.23
Increase	23.1	26.3
Pulse: Before	85.57	82.43
After	99.47	92.27
Increase	13.9	9.84
Palpitation:		
Before	2	1
After	11	4
Increase	9	3
Nervousness:		
Before	2	1
After	10	3
Increase	8	2

groups as to any possible untoward effects such as gastrointestinal disturbance, nausea and vomiting. Basal metabolic recordings and electrocardiographic tracings were taken before and after each period of treatment. Frequent physical examinations and urinalyses were performed.

The results of treatment, as analyzed in tables 2, 3 and 4, show greater weight loss and fewer toxic manifestations with the administration of thyrobrom than with thyroid U.S.P.

Group I on thyrobrom evinced an average weight loss of 17.87 pounds during the period of medication. These identical patients when given thyroid U.S.P. had an average weight loss of 13.57 pounds in a similar period.

Group II on thyroid showed an average weight loss of 8.9 pounds. When changed to thyrobrom, the loss increased to 12.56 pounds.

The over-all weight loss for the entire group on thyrobrom was 15.22 pounds, as compared with 11.23 pounds on thyroid U.S.P.

Increase in basal metabolic rate with the administration of thyrobrom was slightly higher than when treated with thyroid U.S.P., the former producing an average increase of 27.83 percent and the latter 24.05 percent.

Pulse rate as recorded by electrocardiographic tracings showed an average increase of 12.8 per minute in the group first treated with thyrobrom, which was increased to seventeen when thyroid was given. In the group first given thyroid, there was an average increase in pulse rate of 13.9 per minute which fell to 9.84 when

Table 4: Average of Results with Thyrobrom and Thyroid U.S.P.
(Same Caloric Intake while under Thyrobrom and Thyroid U.S.P.)

	Thyrobrom	Thyroid U.S.P.
Number of patients	60	60
Average age	32.65	32.65
Female	55	55
Male	5	5
Average height	62.88 inches	62.88 inches
Daily dosage	7.46 grains	7.45 grains
Weight: Before	203.1 pounds	206.88 pounds
After	187.88 pounds	195.65 pounds
Loss	15.22 pounds	11.23 pounds
Basal metabolic rate:		
Before	+ 4.77	+ 6.23
After	+32.6	+30.28
Increase	27.83	24.05
Pulse: Before	80.5	82.9
After	91.82	98.35
Increase	11.32	15.45
Palpitation:		
Before	3	6
After	9	24
Increase	6	18
Nervousness:		
Before	2	6
After	7	19
Increase	5	13

thyrobrom was administered. The over-all increase in pulse rate on thyrobrom was 11.32 per minute as compared with 15.45 on thyroid.

Considerably more patients complained of palpitation and nervousness when they were treated with thyroid than when they were given thyrobrom. The ratio was eighteen to seven for palpitation and thirteen to five for nervousness.

In no case was there any untoward effect from thyrobrom usage; there were no gastrointestinal symptoms, nausea or vomiting. The urinary specimens were consistently negative for albumin, red cells and casts in those paients who did not show these findings prior to beginning the medication.

Electrocardiographic tracings taken after thyrobrom treatment showed no significant changes from those taken prior to treatment.

Summary

1. Thyrobrom (brominated thyroid) was found to possess the metabolic activity of thyroid U.S.P. at the same time producing less thyrotoxic effect.

2. In a controlled series of sixty cases of obesity, there was greater weight loss with fewer toxic manifestations when thyrobrom was administered than when thyroid U.S.P. was given.

3. Thyrobrom produced no untoward reactions.

4. Tests on three species of animals indicate that thyrobrom is less toxic than thyroid U.S.P.

Conclusion

The results of observations on a group of sixty patients with obesity, who were treated with both thyrobrom and thyroid U.S.P. in a controlled clinical test, show that thyrobrom is a more effective weight reducing agent producing less thyrotoxic effect than thyroid U.S.P.

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Thiouracil in Thyrotoxicosis

William S. Reveno (*J.A.M.A.* June 9, 1945) presents a report on the use of thiouracil in thirty-two cases of thyrotoxicosis.

Fifteen of these patients, eleven females and four males, ranging in age from sixteen to sixty-six, had toxic goiter; seventeen patients, twelve women and five men, aged thirty-nine to eighty-two, had toxic nodular goiter. Symptoms had been present for from two months to fifteen years in the first group and from two weeks to twenty years in the second.

In summarizing the clinical findings in the treatment of these patients, the author states that certain points appear significant. These include:

Improvement occurred on an average in three weeks in patients with toxic diffuse goiters and in approximately nine weeks in those with toxic adenomas. Previous iodization delayed improvement in both types, with a more prolonged delay in those with toxic adenomas.

Twenty-nine patients responded favorably, two were not treated long enough, and one was resistant to the drug. Of five patients in whom an attempt was made to stop treatment, three relapsed, one threatened to relapse and only one has remained in remission for five months. At present it is difficult to predict when and in whom to stop the drug.

Where thyroid enlargement was noted, the gland tended to increase in size and become softer in the first few weeks of treatment. Thereafter recession in size became more pronounced and occurred more rapidly in the toxic diffuse goiters than in the toxic adenomas. Only one instance of drug sensitization was encountered in this series. Five patients developed nausea and epigastric distress early in therapy, and this promptly disappeared after discontinuing the drug for a few days and then resuming at a lower dosage level.

Patients who are iodine fast or resistant can be brought to remission with thiouracil. Those with recurrent hyperthyroidism (postsurgical) appear to be quite sensitive to thiouracil, responding quite promptly. In the mild forms of hyperthyroidism or in the borderline cases, thiouracil may prove extremely useful both therapeutically and diagnostically. It would appear preferable to adopt as the standard normal a basal metabolic rate of plus five percent to minus 20 percent.

Myxedema developed in only one patient in the series and was promptly controlled. Frequent observations and an awareness of this possibility should keep this risk at a low level. Fibrillation and cardiac decompensation in the thyrocardiac may be promptly controlled with thiouracil. An unexplained instance of resistance to thiouracil occurred in this series.

The author concludes that from the data presented, and from that which is rapidly accumulating, thiouracil appears to be the agent of choice in inducing and maintaining a state of remission in thyrotoxicosis.

Editorials

Oral Vincent's Disease

The soldier who is now coming back to us in great numbers must needs bring along with him actual or potential diseases acquired while in service in faraway lands under most trying circumstances. Quite often he will not realize that the malaise, the "rotten feeling", of which he complains, is not merely fatigue, but a "silent partner" not yet ready to show its ugly head completely.

In World War I, "trench mouth" was as common as colds in the head, but we have heard less of it in the present conflict, although it is still common enough. Two Army doctors, Lieutenant William F. Pearce and Captain John B. McDonald report the use of penicillin sodium during preliminary studies of fusospirochetosis in the *J.A.M.A.*, June 2, 1945. Knowing the good results obtained in treating syphilis with penicillin, Heilman, Herrell and others began to use "the mold" in the disease caused by the bacillus and spirillum of Vincent. In the present army study, the investigators stress the importance of definite diagnosis based on, 1, unilateral sore throat, dysphagia, fever, malaise, bleeding gums and foul breath; 2, exudation, underlying ulceration, bleeding when the membrane was detached, and glands in the neck; 3, smears from the lesion showing spirochetes and fusiform bacilli. Any of these symptoms and signs should make one think of Vincent's disease, and, since the malady is "catching", immediate, vigorous management is called for.

Dentists and throat specialists have been fairly successful with varied local treatments, but these are time consuming and tend to discourage the patient from continuing his visits. While, in most cases, local treatment is desirable, especially dental care, the use of penicillin seems to show that it is not indispensable. The plan is to inject one hundred thousand units of penicillin sodium intramuscularly in doses of twenty thousand units every two hours night and day until the total amount has been given. Other amounts and intervals were tried, but the conclusion was that high dosage at two hour intervals produced better results than even higher doses at longer intervals. This is obvious because of the naturally rapid elimination of penicillin from the body, and the difficulty of keeping the blood concentration high. This high pressure procedure is permissible because of the "fool proof" nature of this new agent and its nontoxicity. Practically all authorities have stressed the harmlessness of penicillin, and nothing more serious than "rashes" on the skin have been reported.

We have come to expect amazing results quickly and here they are again. "All patients were symptom free after ten injections." Ulcerations began to disappear the first day and "the tissues appeared completely healed in all cases after ninety-six hours"! No other agent of any kind has ever done that to Vincent's disease, in so far as the literature shows. Now that we have a greater supply of penicillin the cost is receding so that most patients can pay for it. Moreover, these can be treated as office visitors, and after the first four days they can be seen once or at most twice a week for check-up.

It is well to remember that early syphilis may be masked by fusospirochetal infections; therefore, serological studies are a *sine qua non* in all cases. Furthermore, the organisms are mucous membrane lovers, and so they may invade the sinuses, larynx and lungs, eustachian tubes and genitalia. With this in mind one can hardly agree with the authors that the "condition is not fatal or even serious". Certainly lung abscess from any cause is a serious condition, and mastoiditis with some complicating germ growing in symbiosis may prove fatal. It is not well to look upon any disease with too much complacency, especially a contagious one such as fusospirochetosis is. The rule for all successful therapy is ever and always: *early diagnosis and prompt vigorous treatment.*

Shortages

A considerable controversy has been raging between two groups as to the potential shortage of medical men in the near future. According to statistical information, there will be no actual shortage. Factually, however, it would seem that we should have many more men trained in medicine per capita than we have had in the past. Today, with active European hostilities at an end and with the defeat of the Japanese assured, we are experiencing in this country greater shortages than we did when the battles in Europe and Asia were at their height. If we here have shortages of food, of transportation facilities and of housing, we will have shortages of physicians even though we may have the same number per capita that we had in normal times.

We cannot expect our population to remain on a level of health, mental or emotional, as when there is a sufficiency of the basic necessities of life. We realize that what we are now saying is expressed rather loosely, yet even at best, fully one-third of our population was inadequately nourished, improperly housed, and without a sense of security in regard to their jobs. In fact, a goodly portion of our population was living under circumstances not conducive to a state of optimum well being. We take the stand that we should have not only more physicians to look after the health of the underprivileged but more food and bet-

ter housing for them. In spite of the depletion of many of our natural resources due to the war, we are still an extremely wealthy nation in natural resources and in productive capacity, and the inhabitants of this great country should receive the benefits from their great good fortune.

We in this country have had our lives rearranged by the great conflict. We have had to work hard and tighten our belts. We have had to wage military battles in far distant countries on both sides of the globe. We have lost men and expended our materials. But what about those other countries, in Europe and Asia, where natural resources are scant, where the depletion of humans has been great both from the direct losses in war and from starvation and disease? Here, we who live in comparative luxury, find it difficult to visualize or appreciate the sufferings—physical, mental, and spiritual—of those other peoples. They too have shortages of food, housing, and physicians. It is truly difficult for the mind to grasp why in this country, which should be a country of peace and plenty, we should have to suffer from shortages—mainly shortage of good common sense—that brings all these things to pass.

Accidental Means and Results

In actions on accident policies, the New York law does not recognize a distinction between insurance against loss from accidental means and loss from the accidental result. The test of coverage is whether the average man under the facts of the case would regard the loss as so unforeseen, unexpected and extraordinary that he would say it was an accident.

In an action on a New York policy, where the insured, a man sixty-two years of age, suffering from a chronic gallbladder ailment, a serious involvement of the appendix, and a parenchymatous degeneration of the liver and kidneys, died as the result of a major operation in the upper abdominal cavity, which caused a pulmonary collapse, it was held that the death was not an "accident", within the meaning of an accident policy. The court did "not think that the ordinary man, under the attending facts and circumstances . . . would regard the death as accidental." The court, therefore, reversed judgment for the plaintiff beneficiary and remanded the case, with instructions to grant the insurance company a new trial.

The court cited many New York decisions, while qualifying its statement by saying that the New York cases on the point are not altogether consistent, at the same time referring to the distinction as being "drawn in some jurisdictions". The reasoning of the court in the particular case before it was that "we know that death does not ordinarily result from a major abdominal operation", such as an appendectomy, as distinguished from "those cases where the condition of the paient is desperate and an operation is resorted to with the hope of possibly saving his life".

The Indiana Appellate Court is of opinion that there is a distinction between "accidental means" and "accidental results", and that a result different from the one expected is not "accidental" within the meaning of a double indemnity provision of a life policy if it is the result of voluntary intentional acts of the insured.

The plaintiff in an action on such a provision has the burden of proving that the death of the insured was the result of accidental as well as external and violent means. But proof of death by unexplained, violent and external means raises a presumption or furnishes *prima facie* proof that the injuries were accidental. Where the evidence supported the plaintiff's theory that death resulted from an injury suffered solely through a fall, the court was held bound, in the absence of direct evidence of the cause of the fall, to conclude that the fall was accidental within the double indemnity clause of the policy.

The Invention of Laudanum

Paracelsus, who, for the time in which he lived, was a great chemist, in many ways revolutionized the practice of medicine and the use of drugs. One of his feats was the invention of laudanum; at any rate, he invented the name. The composition of his laudanum is not known, as he made a great secret of it. Generally, however, it was a preparation of his favorite drug, opium. Adam, of Bodenstein, a son of the well known theologian, Carolstadt, wrote a treatise in which he professed to explain the mysterious terms used by Paralcelsus.

Another man with decided views, and almost on a par with Paracelsus, was Thomas Sydenham and, like the former, a firm believer in opium and the inventor of a preparation, called Sydenham's laudanum. Indeed, this was the preparation which attained the greatest popularity, and also, was the first liquid preparation generally called laudanum. Sydenham himself wrote of his preparation thus: "I do not think this preparation has more virtue than the solid laudanum of the shops."

Rousseau's laudanum was a fermented compound. Rousseau was a Capuchin monk who became a favorite of Louis XIV, of France, and a fashionable quack. During the first half of the eighteenth century and up to the early part of the nineteenth, Edward Runstall, of the county of Durham, England, brought out a proprietary medicine, known as the Lancaster or quaker's black drop, which had a great vogue. It was a preparation of laudanum and was very palatable. When morphine was discovered and came into favor the popularity of the black drop waned and finally died out in Britain.

News Items

New Drug Exhibit at the Academy.—The first drug exhibit which was opened at the New York Academy of Medicine on October 9, 1944, has been dismantled. On October 1, 1945, a new drug exhibit will be opened which will include a wide variety of new therapeutic agents. The first exhibit was restricted to items bearing on the treatment of infections, and thirty-eight pharmaceutical organizations participated in it.

Trudeau Medal Awarded.—Dr. Florence R. Sabin, emeritus member of the Rockefeller Institute for Medical Research, was awarded the Trudeau Medal of the National Tuberculosis Association on June 6th, in recognition of her work on the pathology of tuberculosis and the origin nature and activities of the white blood cells. The medal is given annually for "meritorious contribution to the cause, treatment or prevention of tuberculosis".

Chicago Society of Internal Medicine.—At the annual meeting of this society, held on May 21st, the following officers were elected: president, Dr. Samuel Soskin; vice-president, Dr. Laurence E. Hines; secretary-treasurer, Dr. Howard L. Alt.

Occupational Therapy Affiliation.—The affiliation of the Boston School of Occupational Therapy with Tufts College in the fall of 1945 completes total affiliation of the sixteen schools for occupational therapy in the United States with approved schools, according to *J.A.M.A.* There are seventeen approved occupational therapy schools, one of which is in Toronto.

Addition to St. Vincent's Hospital Planned.—A sixteen story addition to St. Vincent's Hospital, New York, will be erected as a memorial to Alfred E. Smith. The addition will replace an old five story unit and will give the hospital two hundred and fifty beds and provide other accommodations. The estimated cost is three million dollars, which will be raised by public subscriptions.

Pharmaceutical Research.—A total of fifty-nine colleges of pharmacy, with nearly three hundred faculty members and graduate students, are set to conduct medical and pharmaceutical Research of the American Association of Colleges of Pharmacy. Some colleges are already contributing in an adequate way, he said, but the devising of means for putting all of them to work efficiently was a difficult matter. Firms with a specific pharmaceutical research problem are invited to bring it to the attention of his Committee.

Medicolegal Conference and Seminar.—The departments of legal medicine of the medical schools of Harvard, Tufts, and Boston University, in association with the Massachusetts Medicolegal Society, will present on October 1 to 6, 1945, a six-day program of lectures, conferences, and demonstrations having to do with the investigation of deaths in the interests of public safety. Attendance during five of the six days of the course will be limited to fifteen persons who have registered in advance. On one day (October 3) the program will be open to any physician, lawyer, police official, or senior medical student who may care to attend. Further information may be obtained from the secretary of the Massachusetts Medicolegal Society, 25 Shattuck Street, Boston.

Expansion Program of the Postgraduate Medical School and Hospital.—The New York Post-Graduate Medical School and Hospital, Columbia University, is planning an expansion program which will include a new clinic, classroom and laboratory building to be erected on land adjacent to the present building; a private pavilion of two hundred beds; a new medical school building, and a hospital unit for ward beds to replace the Roosa Building which was opened for service in 1894. The project was suggested as a memorial to members of the profession, who gave their service in the present war. The cost of the program will be fifteen million dollars.

Metropolitan Life to Discontinue Tuberculosis Sanatorium.—Announcement is made that the tuberculosis sanatorium, which the Metropolitan has maintained at Mount McGregor, N.Y., since 1913 for treatment of its tuberculosis employees, would be closed on September 1st. Although a total of 3,507 Metropolitan employees have received treatment for tuberculosis since the sanatorium was opened on November 24, 1913, it was pointed out that the number of patients and the period of treatment had been reduced to a point which no longer justified the maintenance of an institution of this size. Patients now at the sanatorium will be given treatment at the company's expense in comparable sanatoria located nearer to their homes.

Dr. Dublin Returns to Duty at the Metropolitan.—Dr. Louis I. Dublin has resumed his duties as second vice-president and statistician of the Metropolitan Life Insurance Company, having completed his assignment as full-time assistant to Basil O'Connor, chairman of the American Red Cross, and as chairman of the organization's administrative committee. During his seven-month period of service, Dr. Dublin, among his other administrative duties, helped to reorganize the recruitment of nurses for war service, and was active in a survey of the medical and health work of the American Red Cross and in the preparation of a plan for expanded health services in the post-war period. He will continue to assist Mr. O'Connor in the long-term policies and plans of the American Red Cross.

Committee on Publications in Biology and Medicine.—R. Wendell Harrison, dean of the Division of the Biological Sciences of the University of Chicago, has been appointed to the Committee on Publications in Biology and Medicine of the University of Chicago Press. Dean Harrison has been on the faculty of the University since 1937. He is a member of the editorial board of the *Journal of Infectious Diseases*, and widens the scope of the Committee by bringing to it his specialized interests not only in the fields of bacteriology and immunology, but in oral bacteriology and dental caries. Other members of the Committee include: William H. Taliaferro, Eliakim Hastings Moore, distinguished service professor of parasitology; Franklin C. McLean, M.D., professor of pathological physiology; C. Phillip Miller, M.D., professor of medicine; Thomas Park, associate dean of the Division of the Biological Sciences, and Lester R. Dragstedt, M.D., professor of surgery. The Committee advises the University of Chicago Press of research suitable for publication, and acts as a publishing outlet for valuable work being done in biological and medical fields.

West Virginia State Medical Association.—At a meeting of the house of delegates of the West Virginia State Medical Association held in Clarksburg, May 14th, Dr. Andrew E. Amick, Charleston, was elected president and other officers were elected as follows: Dr. Blonda S. Brake, Clarksburg, first vice-president; Dr. James B. Thompson, Oak Hill, second vice-president; Dr. Thomas M. Barber, Charleston, treasurer (reelected). This meeting of the house of delegates was held in place of the seventy-eighth annual meeting which was cancelled on account of war conditions.

Medical Society of New Jersey.—At a meeting of the board of trustees of the Medical Society of New Jersey, held in Atlantic City on May 23rd, Dr. Frank G. Scammell, Trenton, was named president-elect and Dr. Samuel Alexander, Park Ridge, was installed as president. Other officers elected were: Dr. Royal A. Schaaf, Newark, first vice-president; Dr. J. Howard Hornberger, Roebling, second vice-president; Dr. Alfred Stahl, Newark, secretary, and Dr. George J. Young, Morristown, treasurer. The meeting of the board took the place of the one hundred seventy-ninth annual convention of the society.

Washburn's Island Becomes Treatment and Recreation Center for Convalescent Soldiers.—Washburn's Island near Camp Edwards, Mass., where thousands of troops were trained for the beachhead landings they later made, is now being used for the treatment and recreation of combat veterans who are patients at the convalescent hospital there, according to an announcement by Colonel Holland Williamson, Medical Corps, commanding officer of the Convalescent Hospital. He asserted it would be used primarily for therapeutic treatment of convalescent soldiers, but it will also be the scene of fishing, boating, swimming and other recreational programs.

No Shortage of Physicians.—Dr. Willard C. Rappleye, dean of The College of Physicians and Surgeons, Columbia University, denies that a shortage of physicians is imminent in this country, according to the *New York Times*. Medical schools, he said, were now operating at one hundred and ten percent of their capacities and an adequate number of physicians to meet the civilian and military needs were being trained. Dr. Rappleye said some medical schools had eight or more applicants for each first-year vacancy for the October class. An over-supply of doctors, he believed, would lead to "serious deterioration" in the standards and ethics of medical practice.

Iowa State Medical Society.—At the recent annual meeting of this society, Dr. Ransom D. Bernard of Clarion was installed as president and Dr. Robert L. Parker, of Des Moines, was named president-elect. Other officers elected were: Dr. George H. Scanlon of Iowa City, first vice-president; Dr. Conreid R. Harken of Osceola, second vice-president; Dr. John C. Parsons of Des Moines, secretary; Dr. James A. Downing of Des Moines, treasurer; Dr. John I. Marker of Davenport, trustee; Dr. Robert N. Larimer of Sioux City, councilor of the fourth district; Dr. Roy C. Gutch of Chariton, councilor of the ninth district; Dr. James E. Reeder of Sioux City, delegate to the American Medical Association; and Dr. Gerald V. Caughlan of Council Bluffs, alternate.

Research Data Made Available to Industry.—Important research data, much of which is buried in the many departments of the technical schools and universities, is being unearthed for the first time. Through the cooperation of the leading technical schools and universities, Master Theses that are of importance to industry and research, will be indexed in the technical *Digest-Index* issued by The National Research Bureau, Inc., 415 North Dearborn Street, Chicago 10, Illinois. They will be supplied on microfilm through the Library of Industrial Research, a nonprofit organization, acting as clearing house for the exchange of technical, scientific and management information. Many of the leading firms in the United States and Canada are members of the Library.

Blinded Veterans Form Organization.—At a meeting of trainees and visiting veterans, held recently at Old Farms Convalescent Hospital, (Special) at Avon, Conn., the Blinded Veterans Organization was formed. Its purpose is the "promotion of the best interests of its members" and "the promotion and support of the democratic way of life." Lieutenant Raymond Frey, of Lebanon, Pa., former officer who was blinded in the service and who now is employed as blind consultant at Valley Forge General Hospital, is a member of the board. Lieutenant Frey was the first blinded patient to be admitted to this hospital. He has worked here as a civilian in the education and rehabilitation of the blind for the past fourteen months. Interested veterans should write to the Blinded Veterans Association, c/o Old Farms Convalescent Hospital, (Special) Avon, Conn., for further information.

Personal.—Dr. Herbert Gasser, director of the Rockefeller Institute for Medical Research, received the honorary degree of doctor of science at the one hundred and ninety-first commencement exercises of Columbia University.

Colonel Richard Pearson Strong, director of tropical medicine at the Army Medical School, Washington, D.C., delivered three lectures on "Tropical diseases in relation to the present war", during the fourteenth refresher course of the Canadian Medical Association, held in Edmonton, May 7th to 11th.

Dr. Joseph Erlanger, professor of physiology, Washington University School of Medicine, St. Louis, has been awarded the certificate of merit and medal for distinguished service of the St. Louis Medical Society for "his contributions to fundamental knowledge of the cardiovascular and nervous system and to methods of physiological investigation".

Dr. Derek E. Denny-Brown, professor of neurology, Harvard Medical School, Boston, has been granted leave of absence and will return to active military duty as a brigadier general with the British forces in India and Southeast Asia.

Lieutenant Colonel Raymond G. Hussey, M.C., director of the Army Industrial Hygiene Laboratory, Baltimore, Md., has retired from active duty to become dean of the School of Occupational Health, now being organized at Wayne University, Detroit, Mich.

Dr. Basil MacLean, director of Strong Memorial Hospital, Rochester, New York, has been appointed professor of hospital administration in the University of Rochester School of Medicine and Dentistry.

EPONYMS

HARRY J. SIMS, M.D.
Oklahoma City, Okla.

Eponyms represent a form of hero-worship or laudatory praise. Religion, race, friendly colleagues and personal ego have been factors in determining this honor. The Academy of Science, long noted for its eternal bickering, have on various occasions established priority, and in so doing, it has not always adhered to chronological data. Blanchard, writing in 1889, defined an eponym as a sudden impulse of an individual, usually a medical practitioner, to rediscover a disease without recognizing the work of his predecessors. Students of historical medicine are unable to decipher some of the simple eponyms. The B.N.A. has gradually eliminated many anatomical eponyms and used descriptive terms. Many of the present accepted medical eponyms could be deleted from the literature without detracting interest in the subject.

There are many difficulties in recognizing a specific eponym when the same name is used in referring to a different disease. There is an R. W. Smith fracture and a Henry Smith operation for hemorrhoids. S. A. K. Wilson described lenticular degeneration and E. Wilson recognized exfolitative dermatitis. F. Pick, A. Pick, J. Pick, and L. Pick each described a separate morbid condition. Petit's canal was described by J. P. Petit, a diplococcus by L. Petit, a lumbar hernia, triangle and herniotomy by J. L. Petit, and there is an A. T. Petit law.

Difficulty is met in associating an eponym with a disease when an individual's name is attached to several diseases. Marie in 1886 gave the earliest description of acromegaly. His name was also connected with hypertrophic pulmonary osteoarthoplasty, and hereditary cerebellar ataxia. Von Recklinghausen's name is likewise associated with several diseases, one of which was described by Troisier twenty-eight years before the publication of Von Recklinghausen's article. There is a Pott's fracture, Pott's spine, Pott's puffy tumor of the scalp and Pott's aneurysm, gangrene and paraplegia.

Occasionally the name of a patient becomes attached to a disease. Andrews described a mass of hyperplastic glands in the abdomen of Mrs. Mortimer, and Hutchinson suggested Mortimer's disease. Friedreich (1825-82) recognized hyperostosis of the bony structure in two brothers of the Hagner family—hence Hagner's disease. Flexner isolated the Bacillus dysenteriae from the stools of a patient named Harris, and wishing to divide honor with the patient, he gave it the name of Flexner-Harris strain of bacteria. Other clinicians sought priority by eulogizing their names with a disease at the time of publication of their original articles. Blake in 1877, and Spencer in 1899, chose this method of establishing an eponym.

Many eponyms are ambiguous and many are associated with occupational disease. At one time it would have been proper to say that a patient suffered from mule spinner's, pearl worker's and wool sorter's disease. If written eponymically it might read thus: a patient suffering from ulceration of the scrotum developed recurrent inflammation of his bones and before death pulmonary anthrax was a predominating factor. In medical parlance there is Bostock's disease, Cruveilhier's disease and Döhle's disease. Translated as a case history it would be permissible to state that a patient suffering from hay fever subsequently developed progressive myelopathic muscular atrophy of the stomach and in the final stage syphilitic aortitis supervened.

Prominent medical men have their names associated with certain diseases which they did not first recognize. Hey in 1797 described his method of amputation. Later he recognized infantile scrotal hernia and an internal derangement of the knee joint. There is also a Hey's bone saw and a ligament known by his name. The saw was designed by Dr. Cockell, and the ligament was previously described by Gimbernat, a surgeon to the King of Spain. Cowper, of England, published a text on the *Anatomy of the Human Body*. His illustrations were purloined from the drawings of Bidloo, an authority on the subject; however, he failed to give him credit. He also described the capillary circulation in the cat and in the dog. Malpighi demonstrated the capillary circulation when Cowper was only five years of age. In 1702 he recognized the glands which bear his name. These glands were accurately described by Méry in 1684. Cowper commanded a generous respect of the medical nestors and presented numerous papers before the Royal Society, and yet his articles failed to state that his work was not original. Some historians are inclined to believe that he recognized the type of pulse described by Corrigan in 1829. If this is true, it represents the only original contribution he made during his active career.

In many instances investigators whose names should have been included in hyphenated eponyms have been overlooked by subsequent writers. Laurence and Moon in 1866 independently described a syndrome, the description of which remained buried in the archives of medicine. Bordet recognized the disease. Later Biedel recognized a case and the condition became known as Laurence-Moon-Biedel disease. Bordet was not recognized either capriciously or unintentionally. Other clinicians have lost their names in a tenuous shuffle for priority. Verneuil in 1866 described syphilitic bursitis. Churchman described several cases and suggested the term Verneuil's luetic bursopathy. The same condition located in the knee joint is known in England as Clutton's disease, although the disease was described by Ricket in 1853.

National pride and jealousy enters into the element of bestowing honors. Juvenile osteochondritis of the hip is known by the name of Legg's disease (Legg, of Boston, 1874-1939), Perthes' disease (German surgeon, 1869-1927), Calvé's disease (French surgeon, 1875) and by Waldenström's disease (a Swedish surgeon). The Büdinger-Ludloff-Laewen eponym has been used in describing a pathological fracture of the patella. An extreme example of hyphenated eponyms is associated with exophthalmic goiter. The names of Parry, Flajani, Scarpa, Graves, Basedow, Stokes, Demours, Marsh and Parsons have been used interchangeably in a description of the disease. The choice of these names depended on one's nationality and personal feelings and on those who failed to accept chronological exactitude. Parry first recognized the disease but did not report it until 1815; Osler in 1898 suggested Graves disease. Barlow's disease was named by Heubner in Germany.

Definite pathological diseases and injuries are occasionally associated with an individual ailment. Pott's fracture was so named because Percival Pott suffered from a fracture which he accurately described. Little, a victim of equinovarus, described congenital paraplegia which was later known as Little's disease, however, the disease was described by Heine in 1840.

There is a class of jargonistic eponyms such as dancing disease, which represents a variety of dancing mania popularly believed to be caused by the bite of a tarantula. Bridegroom's disease was thought to be the result of sexual excess following which thrombosis of the pampiniform plexus developed. Condon devised a sheath from the cecum of a sheep which later became known as a condom. Church dignitaries and public opinion forced him to go elsewhere to maintain a livlihood.

Not all clinics and investigators have had honors bestowed upon them. Philipp Semmelweis in 1847 recognized the etiology of puerperal sepsis. His teachings were not accepted by the profession and he was forced to resign as an instructor in obstetrics. A similar dishonor was bestowed on the discoverer of the cause of lead colic. Simpson, who discovered chloroform and advocated its use in obstetrics, was beriddled by the clergy because the relief of pain during childbirth interfered with the teachings of the Bible. Stringent laws were passed to prohibit its use in obstetrics. Rhazes, an Arabian physician (860-932) was the first to recognize measles. In spite of his acumen as a diagnostician, he died blind and in poverty. Andreas Vesalius, at the age of thirty-eight, completed a book entitled *The Fabrica Corporis Humanis* in which he opposed the teachings of Galen. Sylvius circulated a story that he personally saw Vesalius dissecting the body of a Spaniard while the heart was beating. He was brought before the Inquisition and only through the King was his execution prevented. He was ordered to travel one year in the Holy Land. The ship was wrecked and he died in an old blacksmith shop by the seaside.

Eponyms are advantageous in certain instances. Hodgkin's disease is preferable to the use of its long list of synonyms, as infectious granuloma, malignant granuloma, lymphomatosis, lymphadenoma, lymphogranulomatosis, granulomatosis maligna, lymphosarcoma, anemia lymphatica and pseudoleukemia. Kohler's disease is also known as tarsal scaphoiditis, epiphysitis juvenilis, osteoarthrosis juvenilis and os naviculare pedis retardatum.

Change in Medicines.—There have been tremendous changes in drugs over the past thirty-five years, says the *J.A.M.A.* Selections made by a group of professors of medicine put penicillin, the sulfonamides and antibiotics as the most important remedies developed since 1910. Other important remedies developed in that period include whole blood, blood plasma and blood derivatives; quinacrine (atabrine); ether and other anesthetics; digitalis; arsphenamines; immunizing agents and specific antitoxins and vaccines; insulin and liver extract, other hormones and vitamins. The ten most important drugs used in 1910 were listed as: ether, morphine, digitalis, diphtheria antitoxin, smallpox vaccine, iron, quinine, iodine, alcohol and mercury.

Book Reviews

Surgery

Principles and Practice of Surgery. By W. WAYNE BABCOCK, M.D., emeritus professor of surgery, Temple University. Written with the collaboration of thirty-seven members of the faculty of Temple University. With 1141 engravings and eight colored plates. Philadelphia: Lea & Febiger, 1944. Pp. 1331. Price $12.00.

This unique book is the culmination of a life's work. It gives the working knowledge of both common and rare conditions in surgery occurring not only in the United States but throughout the world. By concise statement and careful editing it has been possible to incorporate more detail in modern surgical practice than any other textbook has been able to achieve before. Even some of the newer surgical techniques developed during the war are included. It is an outgrowth of the author's textbook on surgery now apportioned to different authors working together in one institution. The book is divided into general surgery, surgical technique, surgery of systems and regional surgery, well illustrated and concluded with a bibliography for each chapter. Striking advances are culled from all branches of medicine, including staphylococcic infections; the evidences of toxicity; limited antiseptic action of sulfonamides applied locally to wounds and to burned surfaces; harm resulting from the washing of wounds; introduction of thrombin containing media to produce hemostasis and primary adhesion between divided tissues; substitution of aseptic pressure methods for the coagulation treatment of burns; improvements in the prevention and treatment of thrombosis and embolism; increased safety brought to transfusion from recognition of the factor; modifications in the use of plasma; parenteral feeding; and the maintenance of fluid and electrolyte balance.

Heparin and dicoumarin have come into use to prevent or control thrombosis, vitamins are preventing hemorrhage, and facilitating wound healing; and certain hormones are being used to control neoplastic growth. It has been found feasible to drain the free peritoneal cavity for a number of days by the use of nonirritant drains, which in combination with continuous aspiration has led to reductions in the morbidity and mortality of many abdominal operations. New and less irritating suture materials have markedly decreased infections in closed wounds, and with muscle-splitting incisions have largely eliminated wound disruption. The nonirritating alloys have inaugurated a new era in the internal and pin fixation of bones and joints, and also have provided mobility in certain forms of bony ankylosis.

New or improved operations have been developed for diseases of the heart and lungs, for affections of the pancreas, for cancer and congenital fistula of the esophagus, for complete gastrectomy, and in the transthoracic approach for operations upon the stomach. Further evidence as to the upward lymphatic spread and diffusion of rectal cancer has stimulated the development of operations, in which colostomy is eliminated and a functional anus retained. Recently, aided by the preoperative use of sulfasuxidine, there has been increasing tendency toward single stage resections without colostomy as a preferred curative or palliative op-

eration for cancer of the colon. Through clinical research the symptomatology of a number of diseases has been changed. For example, contrast the rather hazy and indefinite symptomatology until recently accepted for cancer of the stomach, hiatal hernia and displaced nucleus pulposus, with the crisp, clear-cut diagnostic symptoms now available. The book teems with such newer knowledge and is a welcome edition for the practitioner and surgeon alike.

Oral Surgery

Essentials of Oral Surgery. By Vilray Papin Blair, A.M., M.D., F.A.C.S., professor emeritus of clinical surgery in the School of Medicine and of oral surgery in the School of Dentistry, Washington University, St. Louis; and Robert Henry Ivy, M.D., D.D.S., F.A.C.S., professor of maxillofacial surgery, University of Pennsylvania. With the collaboration of James Barrett Brown, M.D., F.A.C.S., associate professor of clinical surgery in the School of Medicine, Washington University, St. Louis. Third edition. With numerous illustrations. St. Louis: The C. V. Mosby Company, 1944. Pp. 624. Price $6.50.

The first edition of this valued volume was published in 1923. Thirteen years later in 1936, a second edition brought the book "up to date". Further up-to-dateness was needed to discuss shock, hemorrhage, burns and wounds, and also treatment of jaw fractures and the use of general anesthesia in this field. Hence, this 1944 edition. The result is a comprehensive and excellent treatise from which much information even by "reading the pictures" can be obtained. Black and white drawings and photographs elucidate the text. As for penicillin, and what book would be complete without some reference to it, the authors state that "it bids fair to become one of the most valuable adjuncts to surgery", given time, of course to "evaluate" its virtues. The human organism may be aided also "by the introduction of specific antibodies against the particular infection in the form of serum and vaccines". In the light of recent pejorative opinions emanating from high places in re the uselessness of vaccines, this statement is welcome. There is no need for the "newer remedies" to replace entirely time-honored agents which in the hands of those who know how to use them have been of great service in our medical armamentarium.

Hand Surgery

Surgery of the Hand. By Sterling Bunnell, M.D., honorary member of American Academy of Orthopedic Surgeons. With 597 illustrations. Philadelpha, London, and Montreal: J. B. Lippincott Co., 1944. Pp. 734. Price $12.00.

Interest in the hand, its injuries and diseases, has increased greatly since the beginning of this war, although it is a matter for great concern at all times, in peace or in war. The reason is obvious. Crippled hands may make earning a living impossible, and the subject becomes or may become a "public charge". In the language of this book: "Hands lead the list of industrial accidents and are responsible for a large portion of compensation expense." A needed emphasis is to be placed on the relationship of hand to eye, and it is probable that many injuries to hands take place when the owner is *not looking*. He misjudges the distance from a buzz saw, the object he is working on slips, and in a split second the worker is crippled for life. This sentence may now be less severe and less prolonged, thanks to the marvelous, painstaking "plastic surgery" on nerves and tendons. Nerve grafting has first place, then restoration of other tissues supplied by nerves and blood vessels. The author stresses the importance of *early* treatment of infections and injuries. Flexion contractures and fixations make joints immovable or greatly limited. However, the time element may get away from us because one has to wait between various surgical procedures for healing and partial restoration to take place before going on to the next step. Plastic, orthopedic and neurological surgery all enter into restoration of maimed hands, and any surgeon working in this field must be skilled in all of these "specialties". Most difficult of all are those cineplastic procedures where hands have been amputated and some prosthesis must be contrived. All the ingenuity, fortitude and persistence both of surgeon and patient must be brought to play in these heart-breaking cases each of which presents an individual problem . . . Where only certain parts of a hand are lost, two or more fingers for example, every effort must be made to preserve the thumb, which in this case is the most important of all the digits.

Maxillofacial Surgery

Traumatic Injuries of Facial Bones. An Atlas of Treatment. By John B. Erich, D.D.S., M.D., assistant professor of plastic surgery, Graduate School, University of Minnesota, and Louie T. Austin, D.D.S., F.A.C.D., head of Section on Dental Surgery at the Mayo Clinic. In collaboration with the Bureau of Medicine and Surgery, U.S. Navy. Philadelphia and London: W. B. Saunders Company, 1944. Pp. 600. Price $6.00.

These authors are specialists in plastic, oral and dental surgery at the Mayo Clinic. They have been giving courses in these subjects to groups of medical officers in our Army and Navy. Surgeon General Ross T. McIntire, of the Navy, has written a foreword to the book in which he states that the Medical Department of the Navy is grateful for the fine work "in instructing physicians and dentists in the principles of maxillofacial surgery." In fact the plan of the book is based on many requests from officers of the armed forces.

On the left page as we run through the book, there is generally an illustration of a fracture of the jaws or facial bones under a heading: Problem number blank; on the right hand page is the text explaining how that problem may be solved by wires, splints, or other surgical devices. Therefore, one may use this book as an "atlas" to be referred to when some actual patient appears with an injury. This is an extremely practical and useful method of instruction, for both picture and text are clarity personified. There are 333 illustrations, some of which are reprinted wherever they are needed in descriptive matter. It is assumed that the reader has already acquired some knowledge of intraoral and extraoral wiring, and the construction of plaster head caps and dental splints. However, to make this certain, detailed information is set down in the last three chapters for those in need of it. Surprising as it is, most surgeons who see injuries of the face and jaws know what awful punishment one can take in this region and still live. Stories of Jap atrocities on Bataan give added evidence of this.

Here is one of the most practical handbooks which has come out of this war, although the basic principles were previously known. There is at least one acceptable form of treatment for every common type of fracture.

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JULY 1945

Medicolegal Notes

Construction of Hospitalization Policy

In an action on a hospitalization policy, which included room and operating room charges, anesthetic and laboratory fees and the cost of surgical operations, the claim was for services rendered to the plaintiff in connection with an appendectomy operation for which she was confined in a hospital for twelve days within ninety days after the date of the policy. Under the terms of the policy it was essential to the company's liability for all services rendered within that period that the plaintiff should show that the operation resulted from an accident. Failure to give written notice to the company of this fact within ninety-one days after entry to the hospital, as required by the policy, did not relieve the company of liability when the insured filed her hospital bills with the company as requested by one of its employees and the company requested no further information.

The operation schedule of the policy fixed $75.00 as a fee for a simple appendectomy and $100.00 if the operation involved "drainage of appendix abscess." The surgeon testified insured's appendix was not abscessed and a drain was inserted merely as a precautionary measure because of inflammation. Insured was held entitled only to an allowance of $75.00. Sturgis v. American Hospital and Life Ins. Co., Missouri Appeals, 174 S.W. 2d 917.

Construction of Hospital Expense Policy

In an action by an insured person to recover on a hospital expense policy, the Illinois Appellate Court holds, Domino v. National Casualty Co., 52 N.E. 2d 837, that under a hospital expense policy insuring against sickness and hospital expense for a period of one year and expressly stating that the policy did not cover expenses for appendectomy incurred within the year, if a hospital expense policy is free from ambiguity, it will be construed by the courts like any other contract. If it is ambiguous the rule of construction most favorable to the insured will be adopted.

Permanent Disability

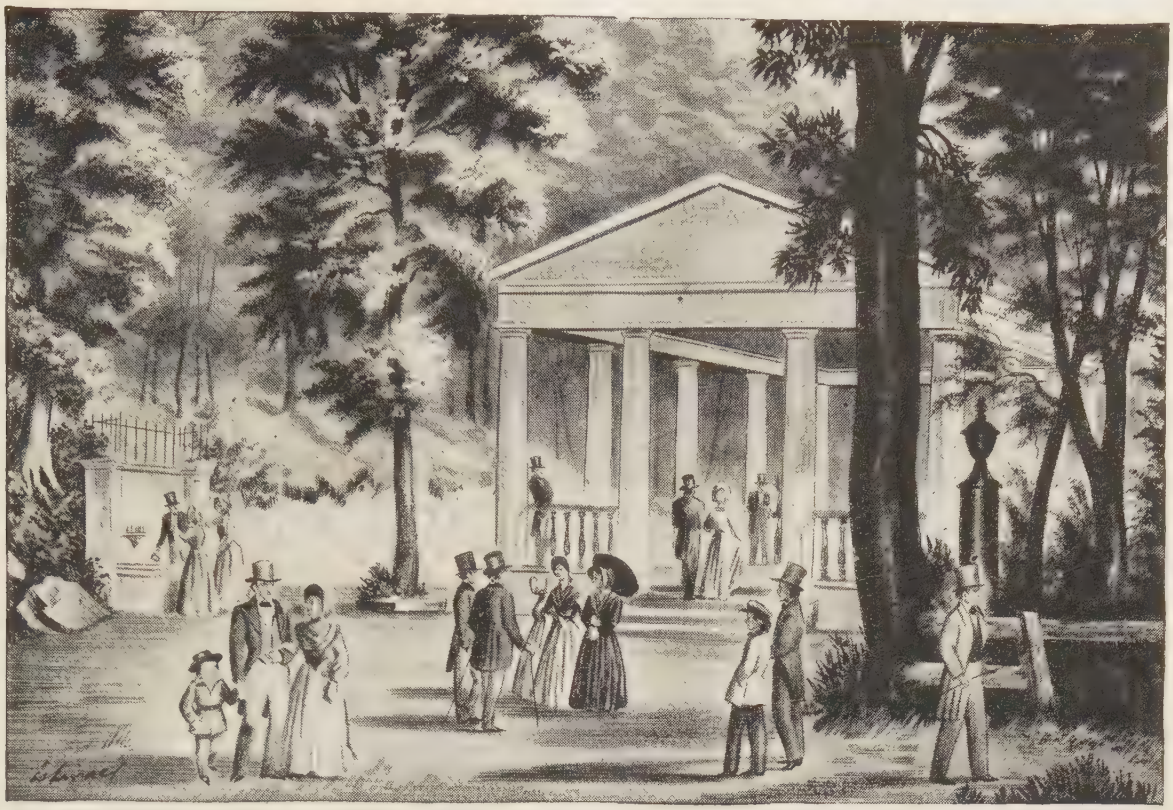
In Hughes v. Prudential Ins. Co., 179 S.W. 2d 630, an action on a disability provision of a life policy, the Kansas City (Mo.) Court of Appeals held that an instruction which told the jury, in effect, that neither the phrase "permanent disability" nor the phrase "permanently disabled" necessarily denotes, implies, or means a condition which must forever exist or one which shall be everlasting or for life", constituted merely an abstract statement, and for that reason the giving of it constituted reversible error.

Infection From Pulling Hair From Nose

Accident benefits were allowed to a beneficiary who alleged that the insured died as a result of an infection after pulling a hair from his nose while shaving. Assuming that the hair was intentionally pulled from his nostril by the plaintiff, the Texas Court of Civil Appeals held, on the authority of a prior case, International Travelers Association v. Francis, "similar in all material respects" but relating to death from Ludwig's angina caused by infection following pulling of a wisdom tooth, that the insured's death, from pyogenic infection resulting for insured's act, was "accidental" and resulted directly from bodily injuries effected solely through "external, violent and accidental" means within the insuring clause of the policy, such a result being so rare, unusual and extraordinary. Other cases besides the Francis case were cited by the court, but, affirming judgment for the plaintiff, it placed its decision on the fact that there being no evidence of any other kind to account for the origin of the injury, what was said in the Francis case relative to the pulling of the tooth was equally applicable here relative to the pulling of the hair. Pacific Mut. Life Ins. Co. v. Schlakzag, Texas Court of Civil Appeals, 180 S.W. 2d 980.

Expert Evidence Necessary as to Cause of Fall

Medical testimony was held necessary in a workmen's compensation proceeding under the Pennsylvania Act, as to the existence of a causal connection between the accident claimed for, a fall (alleged to have caused prolapsus of the claimant's uterus in addition to fracture of her leg) and the claimant's disabling uterine condition. And it was the exclusive province of the Workmen's Compensation Board to weigh conflicting medical opinions in the light of all the evidence and choose between them. Berkhamer v. Heinsling, Pennsylvania Superior Court, 28 All. 2d 807.



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Tuberculosis Survey in Harlem

More than five hundred young people were given free chest x rays on Tuesday, May 8th, at a one-day x ray survey arranged by the Central Harlem Council for Community Planning. The Central Harlem Council is a federation of sixty social, health and recreational agencies serving central Harlem and is affiliated with the Welfare Council of New York City.

In making the announcment it was stated that the death rate from tuberculosis in Harlem was more than four times the city average, and for Negro young people between the ages of fifteen and twenty-four it was even higher than the rate for Harlem as a whole. By detecting danger signals at an early stage through x ray examination it was believed that this shocking death rate could be reduced substantially. Medical aid is to be made available by the Central Harlem Health Center for all young people found to have incipient tuberculosis in this survey. The portable x ray equipment and the staff for the survey was supplied by the Health Department.

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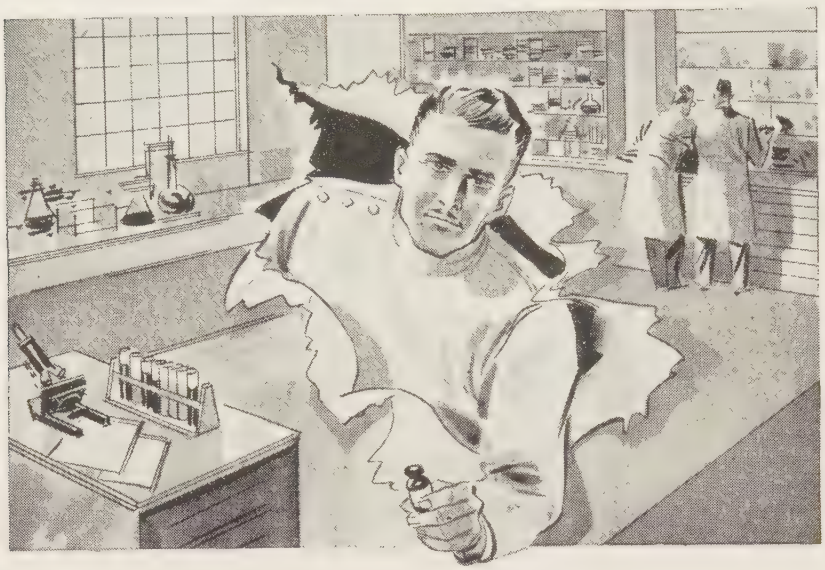

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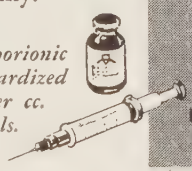

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Iron

In some countries the cow is held sacred, but in civilized countries the golden calf is worshipped more enthusiastically. The cow that gives good milk, which contains the ingredients making for sound health, for instance, a sufficient quota of iron and iodine, is worthy of worship, or at least of respectful homage. Every effort should be made to insure that cow's milk contains these two important elemental bases of the human body.

Iron, like iodine, is one of the main supports of the body and upon its strength and stability the body relies. Iron is present in the earth everywhere, although it happens sometimes that green plants cannot get it out of the soil, and without it they become pale and chlorotic and are restored to their pristine greenness only by injections of an iron salt. If an infant is anemic, the deficiency of iron will have to be made good, especially when the child has to turn to cow's milk for its food. Can it be made certain that this milk will contain enough iron to supply the deficiency? Some say that this can be done, arguing that milk from cows pasturing on grass well supplied with all the minerals and nitrogen that it needs, contains enough iron to prevent anemia. It is said further that it is not difficult to make grass absorb more iron than it gets naturally from the soil, and it is pointed out that when sulphate of iron is applied to the soil, grass becomes glossy and dark green and is said to be sturdier too.

Iron, however, is difficult to absorb. It appears to have been shown that in the normal healthy person the addition of small amounts of iron to the food does not lead to increased absorption; that when moderate amounts are

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injected, they stay in the body, and are not actively excreted by the intestine, but the addition of large amounts of iron to the food is followed by absorption and retention of some of the iron. Apparently the passage of iron from the intestine into the blood stream is governed by the concentration in these two places. Only when the concentration in the intestine greatly exceeds that in the tissues does iron pass from the intestines to the tissues. Naturally in persons suffering from iron deficiency the concentration in the tissues is low, and these tissues will for that reason absorb iron more readily. It seems then that anemic children and grown up persons will absorb iron and the more anemic they are the more greedily they will absorb it. But the explanation of the absorption of iron in the body is not quite clear.

Iron is found in spinach, beef, apples, lentils, strawberries, white beans, peas, potatoes, and wheat. Abundant iron is to be found in the ordinary mixed diet, but infants and young children do not eat such a diet. Their staple food is milk and, therefore, it seems that milk should contain iron, as many babies and young children are anemic and in any case are benefited by some iron. Of foods containing iron, liver is of course, the richest.

A person may be of correct weight for height, age, and sex and yet be undernourished. Vitamins have an effect on the skin which is being appreciated more and more. We are also learning that the typical text book horror pictures of extreme lack of vitamins are not the only ones we must find. There is substarvation of vitamins which affects the skin.

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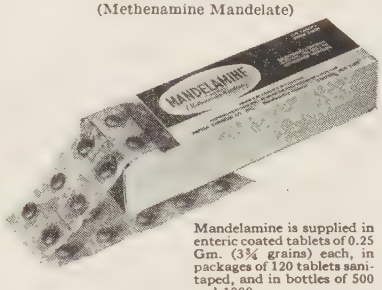

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Penicillin Not a Cure-All

Dr. Francis E. Fronczak, health commissioner of Buffalo, N.Y., says that the public is being misguided into thinking that penicillin, the new socalled miracle drug, is a cure for all ailments, which, of course, is not true. The dramatic reports of cures in cases of gonorrhea, syphilis, blood poisoning and pneumonia have led the thoughtless to vain conclusions. He points out that penicillin in the hands of trained physicians is an important addition to the medical armamentarium, but it must not be considered a cure-all.

Meanwhile, with utmost care, the makers of packaged medicines are engaged in exhaustive scientific research to bring to the public forms of penicillin which can be useful and available for over-the-counter purchase in drug stores. Now that the drug is being released generally for civilians on doctors' prescriptions, this research will be intensified.

Penicillin ointment may well be the first packaged medicine to be developed by this research. Several scientific papers have also appeared on preparations of penicillin taken orally and held in the mouth in the form of lozenges for sore throat. Use of these in England has been reported to be remarkably beneficial. Penicillin is also said to be effective for trench mouth, and the ointments in laboratory and clinical tests, as yet incomplete, give promise of effectiveness in the treatment of skin infections.

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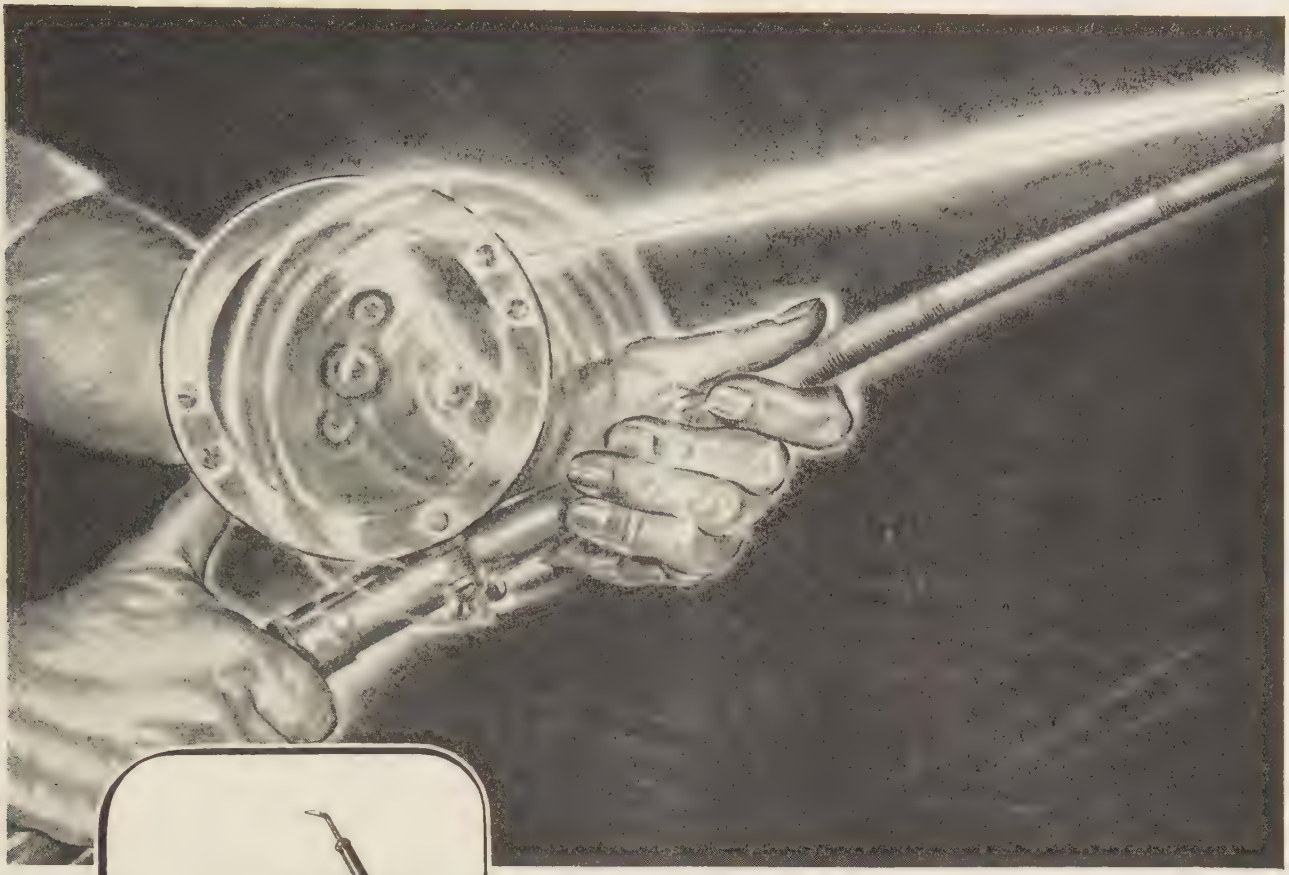

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English Comes First in New U.S. Pharmacopoeia

For the first time, the English language will take precedence over Latin in the U.S. Pharmacopœia, the official compendium of drugs. After six years of discussion by the U.S. Pharmacopœia Committee of Revision, of which Dr. E. Fullerton Cook is chairman, it was decided that the new Pharmacopœia, scheduled for publication in December, would carry the English names of drugs first, followed by the Latin. Medical members of the Committee were chief advocates of the change.

The U.S. Pharmacopœia was first published in the 1820's, and has been published at ten-year intervals since. Recently, the Pharmacopœia Committee decided a new issue should appear every five years, but it is understood that this decision may be reconsidered.

Use of Burdock in Folk Medicine

Various parts of the common burdock (Arctium minus) have been used in folk medicine since time unrecorded, and it looks as though the wisdom of the ancients may once again be proved. C. J. Cavallito, J. H. Bailey and F. K. Kirchner, of Winthrop Chemical Co., Inc., (*Jour. Amer. Chem. Soc.* June 1945) state that watersteeped green leaves of burdock have demonstrated antibacterial activity against gram-positive bacteria. While not as active as some of the other known antibiotics, burdock's ability to kill germs is of particular interest because of the plentiful supply of this weed. The authors emphasize that further research must be conducted before valid conclusions can be reached as to the medicinal value of burdock.

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Favorable Vitamin Reports Quicken Public Interest

Public interest in vitamins has been quickened by recent research reports. An outstanding report was that made by Dr. Tom D. Spies, director of the Nutrition Clinic, Hillman Hospital, Birmingham, Ala., to the clinic's sponsor, the University of Cincinnati. He stated that in 1944 there had not been one death among 5,845 men, women and children treated in the clinic for deficiency diseases. More than eight hundred cured patients, he said, had gone back to work, many in heavy industries, and forty-one to the armed forces. Synthetic vitamins—thiamin, riboflavin, ascorbic acid and niacin—are prescribed at the clinic as supplments to normal eating habits.

Dr. Robert S. Harris, associate professor of biochemistry of nutrition, Massachusetts Institute of Technology, now reveals that upwards of thirty-five percent of accepted nutritional values are lost through "bulk cooking" for military consumption in barracks or aboard ships, or for civilians in hotels and restaurants. Dr. Harris' socalled "snatch test" is attracting considerable attention. With associates of the Nutritional Biochemistry Laboratories of the Massachusetts Institute of Technology, he subjected to chemical analysis three meals of each of seventy-one subjects. The meals were literally "snatched" from their plates to determine the thiamin, riboflavin, niacin, ascorbic acid, calcium and iron content. Adequacy of the diets was measured by comparison with the recommended dietary allowances of the Food and Nutrition Board, National Research Council. So measured, the average daily intake was found to be adequate in ascorbic acid, calcium and iron, but inadequate in thiamin, riboflavin and niacin. Only seven percent of the subject obtained an adequate intake of all these nutrients. Only thirty-five percent received the minimum daily requirement of the Food and Drug Administration in thiamin, riboflavin, ascorbic acid, calcium, and iron.

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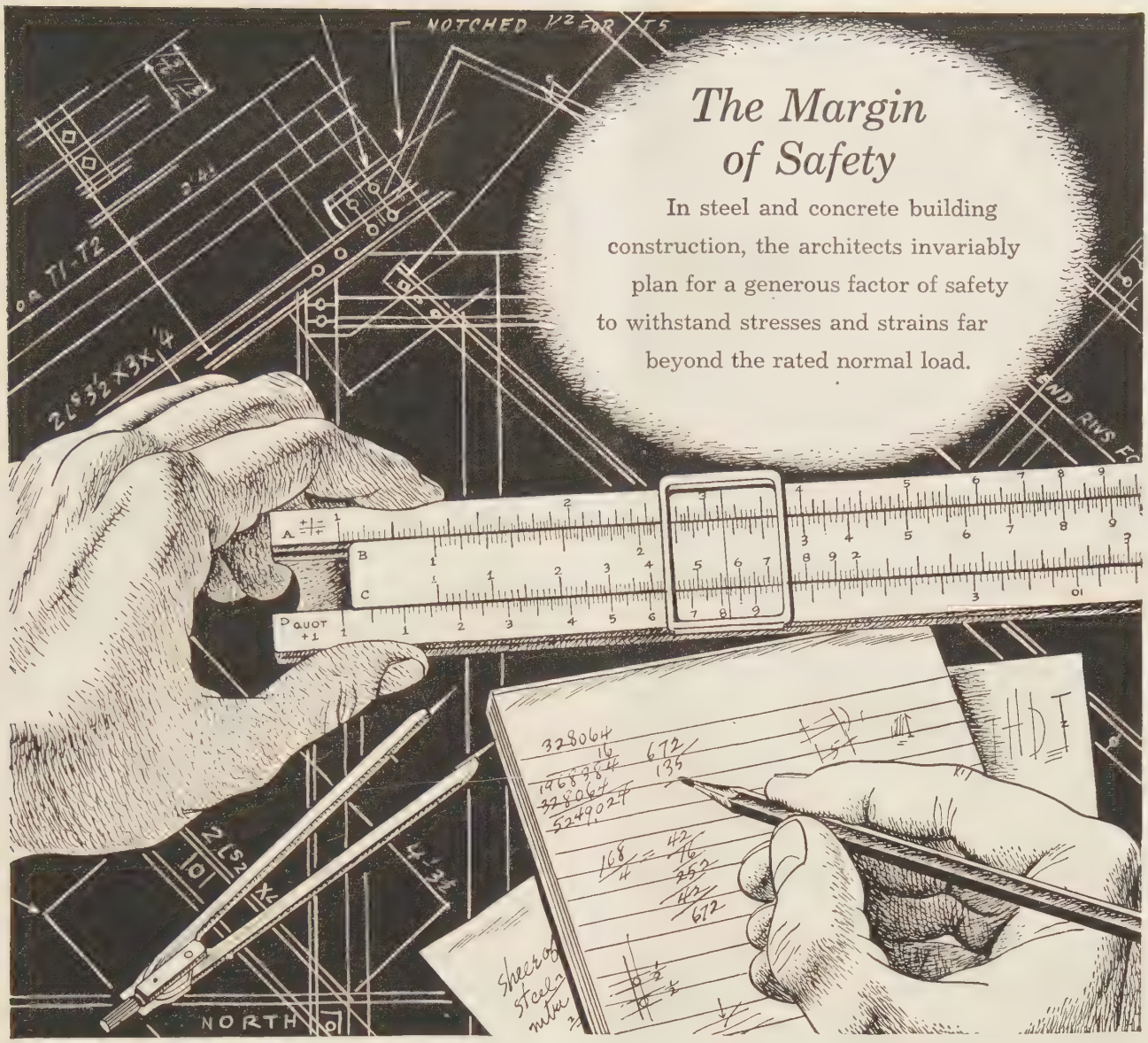
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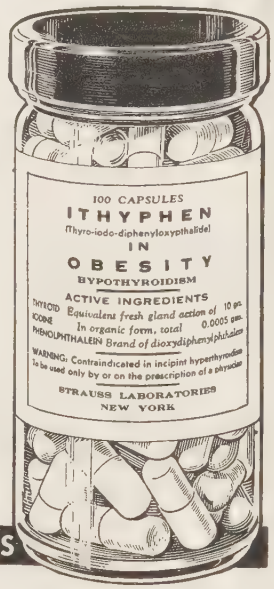

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Mortality Statistics of the Italian Campaign

With a death rate of less than one percent, 917,298 members of the armed forces of the United States passed through U.S. Army hospitals in the Mediterranean Theater from November 8, 1942, when the first American troops landed in North Africa, to the close of March, 1945, just one month before Nazi capitulation terminated the Italian campaign, according to a news release from Allied Force Headquarters in Italy. Of this total, 846,679, or 92.3 percent, were returned to duty, according to Major General Morrison C. Stayer, chief theater surgeon; 64,000, or 6.98 percent, were evacuated to the United States, and 6,619 or 0.72 percent, died of their wounds, injuries or illnesses. The hospital death rate among battle casualties amounted to 3.4 percent. Of a total of 107,402 such cases disposed of 78,846 men were returned to duty, 24,947 were evacuated and 3,609 died despite treatment.

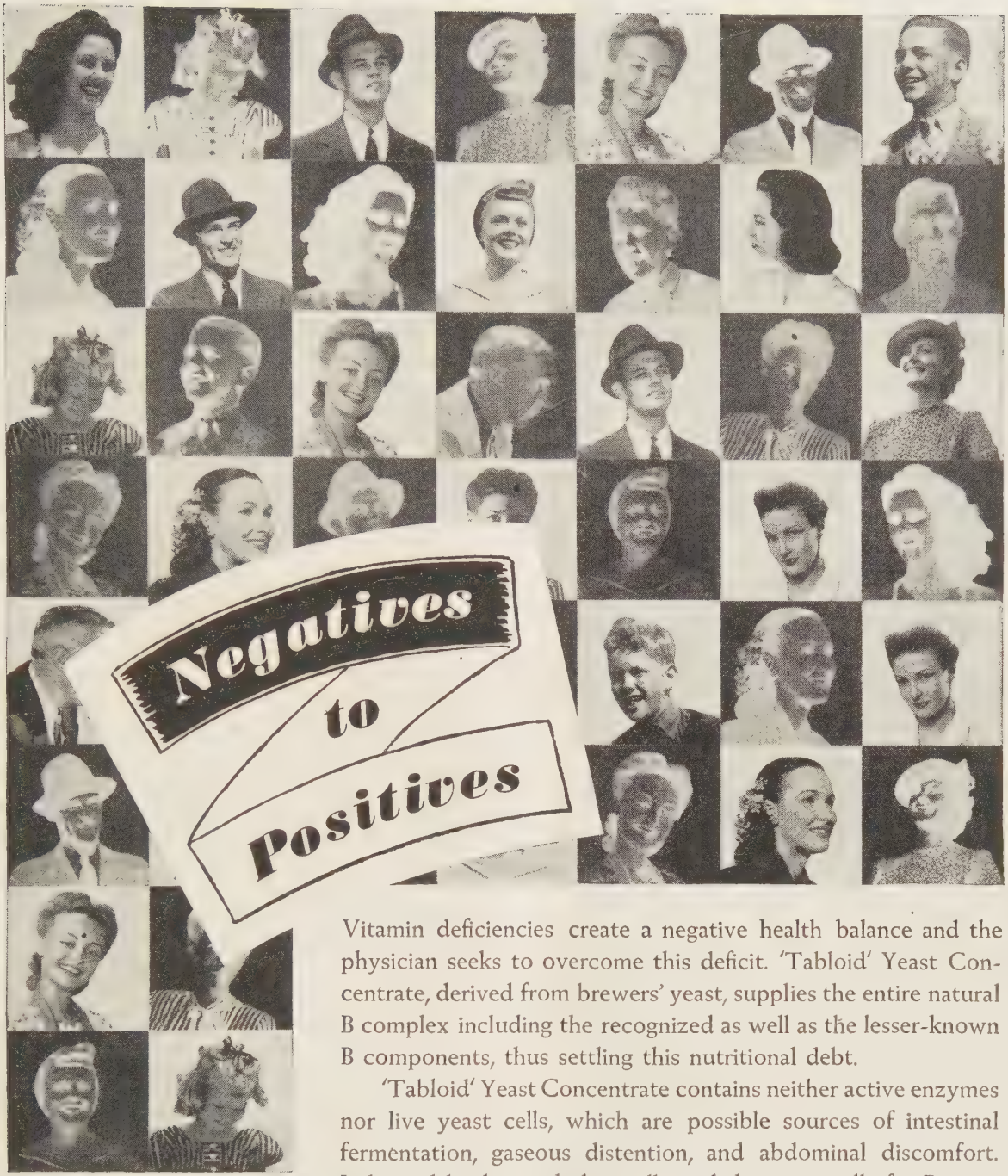
In the disease category there was a total of 703,453 cases, with 672,592 men returned to duty and 30,276 evacuated. The deaths totaled 585. Nonbattle injuries sent 106,443 patients to the hospitals, of whom 95,241 were returned to duty, and 8,777 evacuated. Deaths amounted to 2,425, a rate of 2.3 percent. Respiratory ailments led the disease list with 208,927 cases, followed by intestinal diseases 96,620, malaria 65,592, jaundice 35,101, trench foot 6,411 and sandfly fever 4,335.

Besides Americans, the U.S. Army hospital cared for a total of 113,386 patients drawn from Allied military personnel, accounting for an aggregate of 1,009,173 days of hospitalization. British personnel treated totaled 57,410; 38,112 French, 9,048 Italian, 6,525 Brazilian, and 1,808 Yugoslavian. The other patients included nationals of the Netherlands, Poland, Russia, Finland, Norway, Greece, Belgium, Hungary, Denmark, Czechoslovakia, Austria and China. These figures do not include prisoners of war.

Neurotic Reactions in Psychopaths

At the recent meeting of the Association for Research in Nervous and Mental Diseases held in New York City, Lieutenant Colonel N. Q. Brill, M.C., chief of the psychiatry branch, Neuropsychiatry Consultants Division, Office of the Surgeon General, presented a paper on "Neurotic Reactions in Psychopaths", written in collaboration with Lieutenant Colonel M. J. Farrell, M.C., assistant director of the division. Colonel Brill stated that "although in most instances organic disorders can be differentiated from functional disorders with a reasonable degree of promptness and certainty, a problem which offers no ready solution is the differentiation of malingering from true neurotic reactions."

In conclusion he listed four important points: 1. Malingering and hysteria, while opposite poles of the same sphere, are clinically characterized by a gradual transition from one to the other. 2. An individual's past performance is the best clue to the type of mental process that is involved in a given functional disorder. 3. While malingering may be associated with any type of abnormal mental state, it is often symptomatic of a psychopathic personality. 4. Careful distinction should be drawn between individual with psychoneurosis and those who by reason of defects of personality or intelligence, resort to conscious production of symptoms to avoid their obligations to society.



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Vana-Diazine is said to be indicated wherever sulfadiazine is required in pneumonia, meningitis, gonorrhea, infantile diarrhea, hemolytic streptoccic infections, and Friedländer's bacillus infections. Detailed literature is available from Vitamix Corporation, 632 Race Street, Philadelphia, Pa.

Toward Better Living

The third annual Year Book of American Home Products Corporation, entitled "Toward Better Living," reports that sales in 1944 were the largest in the company's history and that ethical drugs accounted for the largest share of the total volume. During the year the Wyeth Institute of Applied Biochemistry was completed and now is coordinating the research of all Wyeth Incorporated Units. Several new products emanated from this laboratory during the year, including penicillin tablets for oral administration; "purodigin," the first American-made digitoxin to be produced in commercial quantities; methionine, one of the important amino acids; and bornex, a new product for the eradication of head and body lice. Ayerst, McKenna & Harrison, Ltd., the company's Canadian affiliate, completed and put in operation its new laboratories on the outskirts of Montreal, in 1944. Included in the new group of buildings is a large penicillin production unit erected and equipped by the Canadian government and operated by Ayerst. Among the accomplishments of Ayerst in 1944 was the development of antipertussis serum and endotoxoid vaccine for the prevention and treatment of whooping cough.

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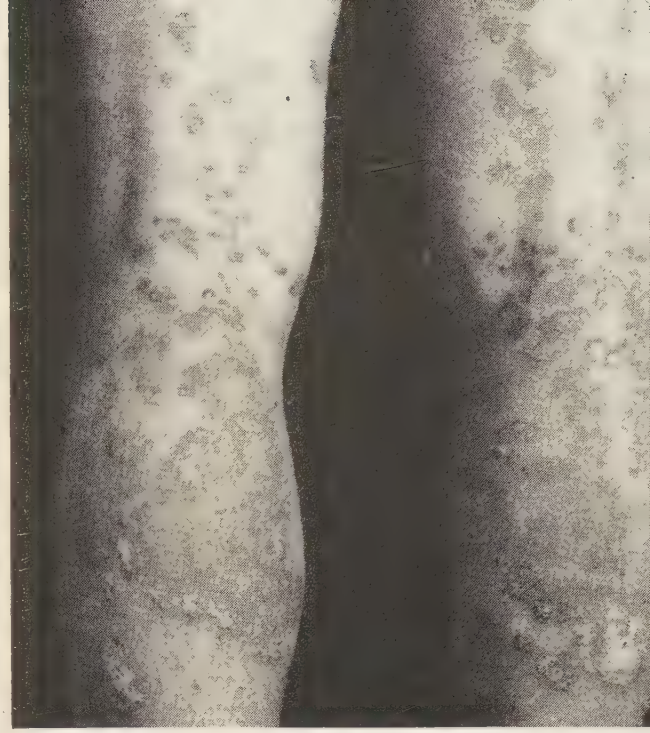

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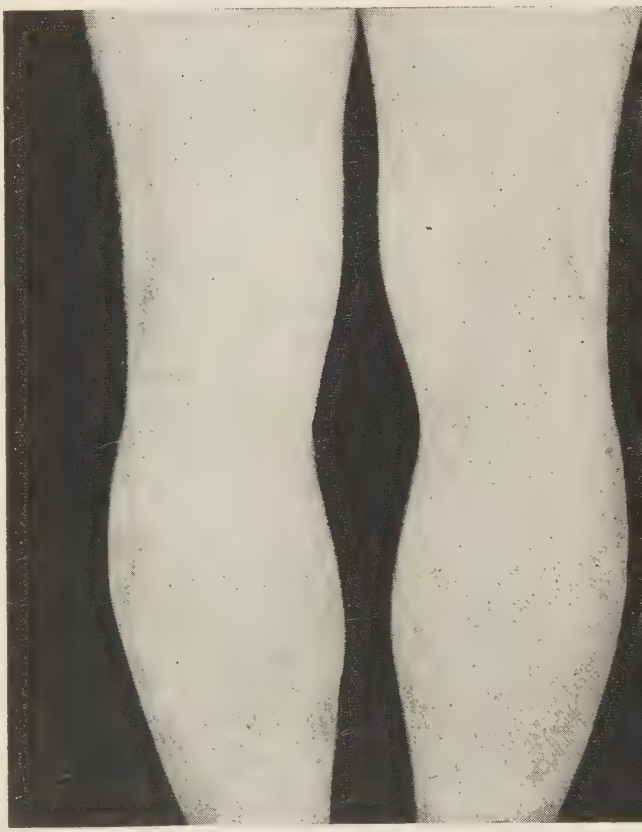

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* * *

Mistress: "Didn't the phone ring?"
Maid: "Yes, Ma'am."
Mistress: "What was it?"
Maid: "Oh, nothing much. A man just said it was a long distance from London. I told him we knew it."

* * *

Neighbor: "I guess you're getting a good thing o' tending the rich Smith boy, ain't ye, doctor?"
Doctor: "Well, yes, I get a pretty good fee. Why?"
Neighbor: "Well, I hope you won't forget that my Willie threw the brick that hit 'im."

* * * *

One patient to another in doctor's waiting room: "How do you do?"
Second patient: "Oh, so, so. I'm aching from arthritis."
First patient: "Glad to meet you. I'm Payne from Chicago."

* * *

"My family thinks there's something wrong with with me," a woman complained to the psychoanalyst, "simply because I like buckwheat cakes."
"But there is nothing wrong about liking buckwheat cakes", the doctor murmured, puzzled. "I like them myself."
"Oh, do you?" The woman was delighted. "You must come up some day. I have seven trunks full."

* * *

The doctor's phone rang one night awakening him from a sound slumber. "My wife, doctor," shrilled a voice. "It's her appendix. You'd better come at once."
The doctor sighed. "Go on back to bed," he said. "She hasn't got appendicitis. I'll look in tomorrow."
The husband became wilder; choking and sputtering, he insisted on immediate attention. "But she can't have appendicitis," insisted the doctor. "I took out her appendix three years ago and I never heard of anyone having two appendices."
"Yea-ah," said the husband bitterly. "Did you ever hear of a man having a second wife?"

Prompt Relief
IN
HAY FEVER

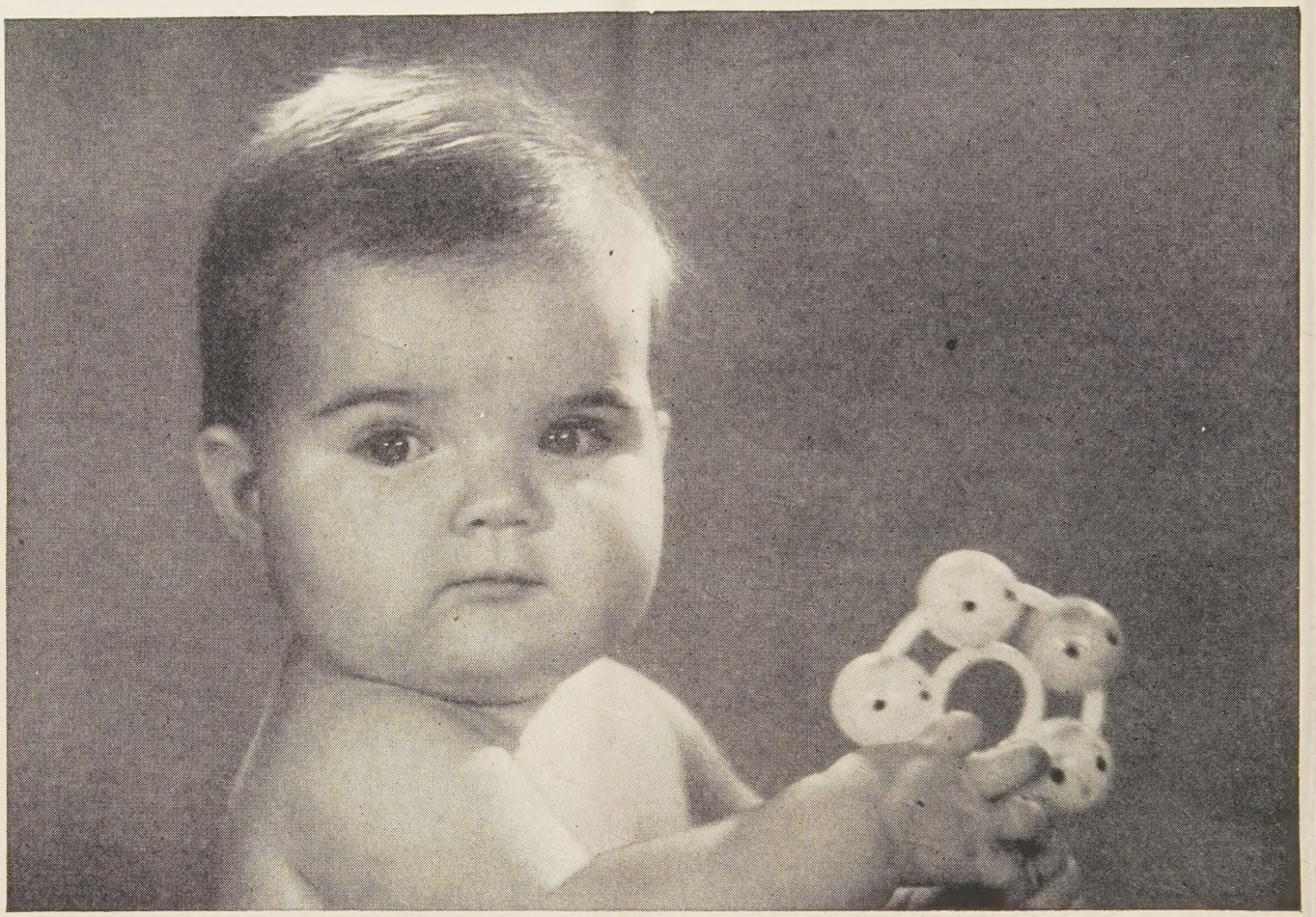
ESTIVIN
A PROCESSED INFUSION OF ROSE PETALS FOR THE ALLEVIATION OF HAY FEVER
ONE DROP IN EACH EYE
CONTENTS 0.25 FLOZ
Schieffelin &
ESTABLISHED 1794

A single drop of ESTIVIN in each eye relieves the troublesome symptoms that usually harasses the hay fever patient. The pollen sensitive membranes of the eyes and nose are promptly and effectively soothed upon the administration of ESTIVIN.

One drop in each eye 2 or 3 times daily is generally sufficient to keep the average patient comfortable during the entire hay fever season. In more severe cases additional applications whenever the symptoms recur will keep such patients relieved throughout the day.

Literature and Sample on Request

Schieffelin & Co.
Pharmaceutical and Research Laboratories
20 COOPER SQUARE • NEW YORK 3, N.Y.



WAR BOND MAN

— CLASS OF '63

Someday you'll want to see that boy, or girl, of yours off to college . . . and *right now* is not too early to start making plans.

Maybe your youngster, like so many other American boys, will work his way through school . . . but even in that case you'll want to be in a position to give him a little help if he needs it.

By what you put aside in War Bonds *today* you can help *make sure* he gets the same chance as other boys, *tomorrow*.

Chances are you're already on the Payroll Savings Plan. Saving as you've never been able to save before. This is fine not only for you, but for your country—*provided you keep on saving.*

But take your dollars out of the fight—and you will be hurting yourself, your boy's future, and your country.

Buy all the bonds you possibly can. Try to get even more than you ever have before. And remember this . . .

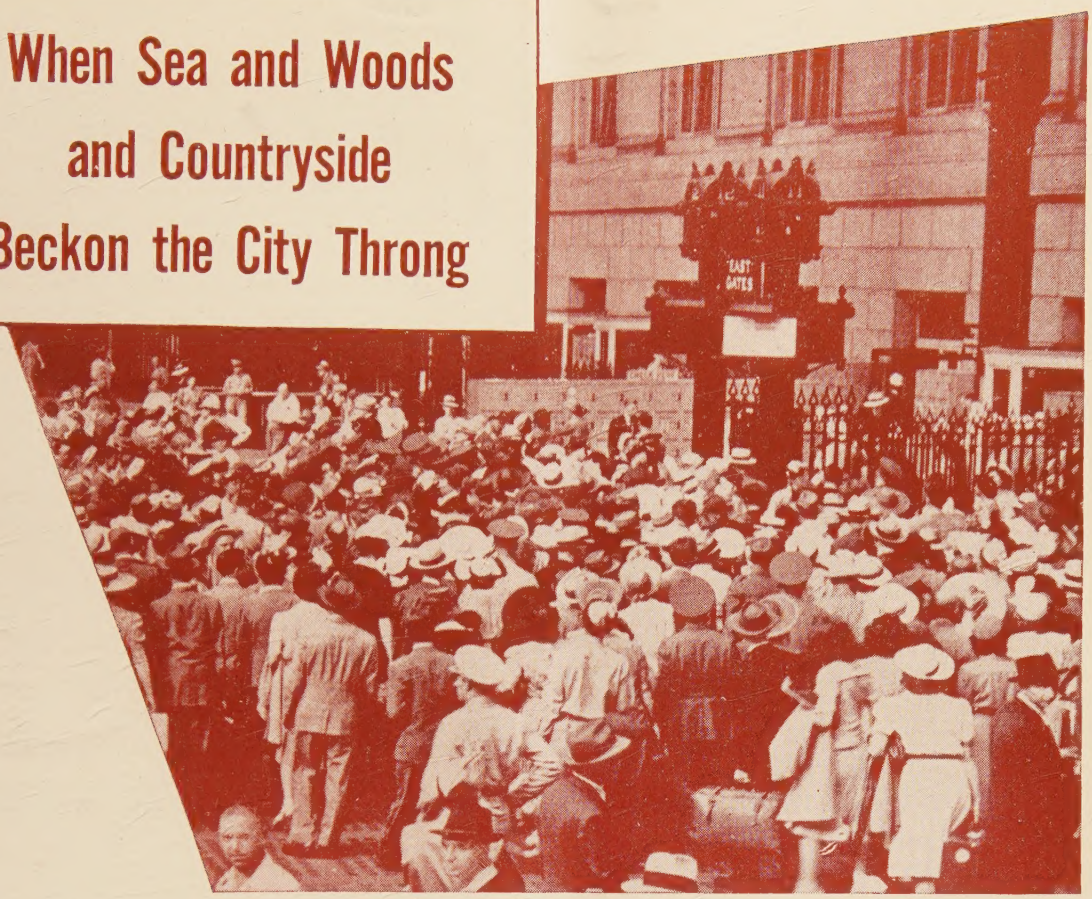
For every three dollars you invest today, you get *four dollars back when your Bonds come due.* You, and your boy, can use those extra dollars.

Make sure you get those Bonds! Hold on to them till they come due!

MEDICAL RECORD

★ *This is an official U. S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council* ★

When Sea and Woods and Countryside Beckon the City Throng



THE irresistible lure of the great outdoors, beckoning the urban dweller, is often fraught with minor hazards and pitfalls, usually followed by days or weeks of intense physical discomfort. Ivy, oak, and other plant dermatitides, urticaria from allergic reaction to spoiled food, and exacerbation of quiescent skin lesions, caused by heat, perspiration and tissue maceration, all lead to intense itching. The pruritus may be so distracting as to more than nullify the benefits of the vacation itself. In these typical summer ailments, Calmitol is specifically indicated. Its dependable antipruritic action quickly controls the torment of itching, and overcomes the desire to scratch. Regardless of underlying cause, pruritus stops when Calmitol is used. A single application is effective for hours, hence only infrequent use is needed.

Thos. Leeming & Co. Inc.

155 East 44th Street, New York 17, New York

CALMITOL

THE DEPENDABLE ANTI-PRURITIC

The active ingredients of Calmitol are camphorated chloral, menthol and hyoscyamine oleate in an alcohol-chloroform-ether vehicle. Calmitol Ointment contains 10 per cent Calmitol in a lanolin-petrolatum base. Calmitol stops itching by direct action upon cutaneous receptor organs and nerve endings, preventing the further transmission of offending impulses. The ointment is bland and non-irritating, hence can be used on any skin or mucous membrane surface. The liquid should be applied only to unbroken skin areas.

TRIPLE ATTACK ON SMOOTH MUSCLE SPASM

TRASENTINE*-PHENOBARBITAL attacks spasm of the abdominal and pelvic viscera in three ways:

- **Direct local action on smooth muscle**

- **Indirect action by blocking motor impulses to spastic muscle**

- **Central nervous sedation . . . potentiating TRASENTINE'S spasmolytic power**

Clinically effective, TRASENTINE-PHENOBARBITAL has found widespread acceptance for the relief of spasm in the gastro-intestinal, biliary, and genito-urinary tracts. It is particularly effective in individuals suffering from hyperexcitability of the autonomic nervous system.

TRASENTINE-Phenobarbital

a Ciba Product

*Trade Mark Reg. U. S. Pat. Off.

Each tablet contains 20 mg. of TRASENTINE (hydrochloride of diphenylacetyldiethylaminoethanol) and 20 mg. (1/3 gr.) of PHENOBARBITAL.

Available in boxes of 40 and 100 tablets.

★

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